Supreme Court, U.S.
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In The

Supreme Court of the United States

October Term 1997

RANDON BRAGDON, D.M.D.,

Petitioner,

v.

SIDNEY ABBOTT ET AL.,

Respondents.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the First Circuit.

PETITION FOR WRIT OF CERTIORARI

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QUESTIONS PRESENTED

1. Is reproduction a major life activity within the meaning of the Americans with Disabilities Act (ADA), 42 U.S.C. §§ 12101-12213?

2. Are asymptomatic individuals infected with HIV per se disabled within the meaning of the ADA?

3. When deciding under title III of the ADA whether a private health care provider must perform invasive procedures on an infectious patient in his office, should courts defer to the health care provider's professional judgment, as long as it is reasonable in light of then-current medical knowledge?

4. What is the proper standard of judicial review under title III of the ADA of a private health care provider's judgment that the performance of certain invasive procedures in his office would pose a direct threat to the health or safety of others?

5. Did petitioner, Randon Bragdon, D.M.D., raise a genuine issue of fact for trial as to whether he was warranted in his judgment that the performance of certain invasive procedures on a patient in his office would have posed a direct threat to the health or safety of others?

LIST OF PARTIES

The parties below were plaintiff/appellee Sidney Abbott, plaintiff/appellee the Maine Human Rights Commission, intervenor United States of America, and defendant/appellant Randon Bragdon, D.M.D.

An amicus brief was filed by the Association of State and Territorial Health Officials, the American Public Health

Association, the Association of State and Territorial Dental Directors, the Rhode Island Department of Health, the Department of Public Health, Commonwealth of Massachusetts, and the Bureau of Health of the Maine Department of Human Services. The American Dental Association also filed an amicus brief.

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OPINIONS BELOW AND JURISDICTION

Abbott v. Bragdon, 107 F.3d 934 (1st Cir. 1997) (1a-30a); 912 F. Supp. 580 (D. Me. 1995) (31a-65a).

The judgment of the United States Court of Appeals for the First Circuit was entered on March 5, 1997. Petitioner's petition for rehearing and suggestion for rehearing en banc were denied on April 22, 1997, Chief Judge Torruella, dissenting. (66a-67a) This Court has jurisdiction pursuant to 28 U.S.C. § 1254(1).

RELEVANT STATUTES AND REGULATIONS

42 U.S.C. § 12102(2): "The term 'disability' means, with respect to an individual – (A) a physical or mental impairment that substantially limits one or more major life activities; (B) a record of such an impairment; or (C) being regarded as having such an impairment."

28 C.F.R. § 36.104: "The phrase major life activities means functions such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working."

42 U.S.C. § 12182(b)(3): "**Specific Construction**. Nothing in this subchapter [title III of the ADA] shall require an entity to permit an individual to participate in or benefit from the goods, services, facilities, privileges, advantages and accommodations of such entity where such individual poses a direct threat to the health or safety of others. The term 'direct threat' means a significant risk to the health or safety of others that cannot be eliminated by a modification of policies, practices, or procedures or by the provision of auxiliary aids or services."

28 C.F.R. § 36.208(c): "In determining whether an individual poses a direct threat to the health or safety of others, a public accommodation must make an individualized assessment, based on reasonable judgment that relies on current medical knowledge or on the best available objective evidence, to ascertain: the nature, duration, and severity of the risk; the probability that the potential injury will actually occur; and whether reasonable modifications of policies, practices, or procedures will mitigate the risk."

STATEMENT OF THE CASE

On September 16, 1994, plaintiff Sidney Abbott arrived at the private dental office of defendant Randon Bragdon, D.M.D., in Bangor, Maine, for an appointment. On her patient registration form, Ms. Abbott indicated that she was infected with HIV, the virus that causes AIDS. People may be HIV-positive for many years without manifesting the set of symptoms commonly known as AIDS, and Ms. Abbott was asymptomatic at the time.

Ms. Abbott was brought into the treatment area and seated in a dental chair. Dr. Bragdon performed a diagnostic dental examination and discovered that Ms. Abbott had a cavity near the gum line on a back, lower tooth. (69a, ¶ 6)**1** He told Ms. Abbott that, pursuant to his infectious disease policy, he would not fill her cavity in his office, but would treat her in a hospital setting. Ms. Abbott said that she would think about it and get back to him. (80a)

Two months later, Ms. Abbott sued Dr. Bragdon in the United States District Court, District of Maine (the "District Court") for disability discrimination under title III of the ADA. Title III prohibits disability discrimination by private entities

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1 This is a reference to paragraph 6 of page 69a of the appendix to this petition. Similar references follow throughout this petition.

in places of public accommodation. The District Court had jurisdiction pursuant to 28 U.S.C. § 1331.

Ms. Abbott argued that she was disabled because she was substantially limited in the major life activity of reproduction, and that asymptomatic HIV infection is per se a disability. Dr. Bragdon argued to the contrary. Dr. Bragdon also argued that even if Ms. Abbott were disabled, he was under no legal obligation to fill Ms. Abbott's cavity in his office because, in his judgment, the invasive procedures necessary to fill her cavity in his office would have posed a direct threat to the health and safety of others, including himself. The District Court acknowledged that the "position taken by [Dr. Bragdon] is not an unreasonable one" (63a), but it nevertheless granted summary judgment in favor of Ms. Abbott. Dr. Bragdon appealed.

The United States Court of Appeals for the First Circuit (the "Appeals Court") recognized the conflict among the circuits on the question of whether reproduction is a major life activity. The Appeals Court explained that "the question is very close," but it decided that "[r]eproduction (and the bundle of activities that it encompasses) constitutes a major life activity [under the ADA]." (11a) The Appeals Court also added a "final observation" implying that it was prepared to follow other courts in holding that all individuals infected with HIV are per se disabled under the ADA. (15a) This conflicts with the Fourth Circuit, which has expressly rejected the view that "HIV-positive status is per se a disability." Ennis v. National Ass'n of Bus. & Educ. Radio, Inc., 53 F.3d 55, 60 (4th Cir. 1995); see also School Bd. of Nassau County v. Arline, 480 U.S. 273, 289-293 (1987) (Rehnquist, C.J., & Scalia, J., dissenting) (tuberculosis, a contagious disease, is not a handicap within the meaning of the Rehabilitation Act of 1973).**2**

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2 The definition of "individual with a disability" under the ADA

With respect to the issue of direct threat, this case presents an issue expressly left undecided in Arline, namely, whether courts should defer to the reasonable medical judgments of private physicians as to the significance of the risk of communicating an infectious disease. Arline, 480 U.S. at 288 n.18. Dr. Bragdon argued that courts should defer to private health care providers' judgments, as long as they are reasonable in light of then-current medical knowledge. (19a-20a) The Appeals Court disagreed. It granted a continuing presumption of correctness to conclusions which it said "seem to be implicit" (23a) in 1993 Guidelines issued by the United States Centers for Disease Control and Prevention (CDC). The seemingly implicit conclusions identified by the Appeals Court are that no further risk-reduction measures are desirable for dental workers when treating HIV infected patients than those measures recommended for all patients in the 1993 Guidelines, and that filling cavities of patients known to be infected with HIV is generally safe.

After reviewing the record, the Appeals Court decided that Dr. Bragdon did not raise a genuine issue of fact by presenting sufficient countervailing evidence to rebut the presumption of correctness attached to the seemingly implicit CDC conclusions. By a vote of five to one (Chief Judge Torruella, dissenting), the First Circuit denied Dr. Bragdon's petition for rehearing and suggestion for rehearing en banc. (66a-67a)

REASONS FOR GRANTING THE WRIT

is the same as the definition of "individual with a handicap" under the Rehabilitation Act of 1973, except that the term "disability" now replaces the term "handicap" in both statutes. In transplanting this definition from the Rehabilitation Act to the ADA, Congress intended the retention of the original meaning. See 42 U.S.C. § 12201(a). Therefore, with respect to the issue of disability, this petition does not distinguish cases arising under the Rehabilitation Act.

I. BECAUSE THERE IS A CONFLICT AMONG THE CIRCUITS ON THE REOCCURRING QUESTION OF WHETHER REPRODUCTION IS A MAJOR LIFE ACTIVITY UNDER THE ADA, AND BECAUSE THIS QUESTION RAISES A SIGNIFICANT AND CHALLENGING PURE ISSUE OF LAW UNDER AN IMPORTANT CIVIL RIGHTS STATUTE, THE COURT SHOULD GRANT THIS PETITION.

A. There is a Clear Conflict Among the Circuits on the Reoccurring Legal Issue of Whether Reproduction is a Major Life Activity under the ADA.

Federal courts in the First, Third, Seventh, Ninth, and District of Columbia Circuits, have all held that reproduction is a major life activity,[3] whereas courts in the Fourth, Fifth, Sixth, and Eighth Circuits, have all held that reproduction is not a major life activity.[4]

The Court of Appeals for the First and Eighth Circuits are expressly in conflict. Compare Bragdon, 107 F.3d 934 (11a)

3 E.g., Abbott v. Bragdon, 107 F 3d 934 (1st Cir 1996); Pacourek v. Inland Steel Co., 916 F. Supp. 797, 804 (N.D. Ill. 1996); Erickson v. Board of Govs. Of State Colleges, 911 F. Supp. 316, 323 (N.D. Ill. 1995); Doe v. Kohn, Nast & Graf, P.C., 862 F. Supp. 1310, 1318-1320 (E.D. Pa. 1994); Doe v. District of Columbia, 796 F. Supp. 559, 568 (D. D.C. 1992); Cain v. Hyatt, 734 F. Supp. 671, 679 (E.D. Pa. 1990); Doe v. Dolton Elementary School Dist. No. 148, 694 F. Supp. 440, 444-45 (N.D. Ill. 1988); Thomas v. Atascadero Unified School Dist., 662 F. Supp. 376 (C.D. Cal. 1986); Bielicki v. City of Chicago, No. 97-C-1471, 1997 WL 260595 (N.D. Ill. 1997); Soodman v. Wildman, Harrold, Allen & Dixon, No. 95-C-3834, 1997 WL 106257 (N.D. Ill. 1997).

4 E.g., Krauel v. Iowa Methodist Med. Ctr., 95 F.3d 674, 677 (8th Cir. 1996); Cortes v. McDonald's Corp., 955 F. Supp. 541 (E.D. N.C. 1996); Zatarain v. WDSU-TV, Inc., 881 F. Supp. 240, 243 (E.D. La. 1995), aff'd,79 F.3d 1143 (5th Cir. 1996); Farmer v. National City Corp., No. C-2-94-966, 1996 WL 887478 (S.D. Ohio).

with Krauel, 95 F.3d at 677. The Court of Appeals for the Fifth Circuit has affirmed, without opinion, the position that reproduction is not a major life activity. See Zatarain, 881 F. Supp. 240, 243 (E.D. La. 1995), aff'd, 79 F.3d 1143 (5th Cir. 1996). The Court of Appeals for the Seventh Circuit has stated in dicta that reproduction is a major life activity. See McWright v. Alexander, 982 F.2d 222, 226-227 (7th Cir. 1992). The Court of Appeals for the Fourth Circuit has been understood as holding that reproduction is not a major life activity. See Cortes, 955 F. Supp. at 546.5

B. The Needless Perpetuation of Conflict and Uncertainty Among Courts Over the Legal Issue of Whether Reproduction is a Major Life Activity Under the ADA is Inefficient and Senseless, and Leads to a Justifiable Public Perception that the Application of the ADA is Fundamentally Unfair and Arbitrary.

Due to the present conflict among federal courts on whether reproduction is a major life activity under the ADA, the very same person (e.g., Ms. Abbott or Ms. Krauel, see 95 F.3d 674) protected by the ADA under the very same facts in, for example, Massachusetts, New Hampshire, Maine, and Illinois, would not be protected in South Dakota, Minnesota, Iowa, and Missouri. Likewise, the very same person liable for the very same actions in the former states, would not be liable in the latter states. This fundamental inconsistency causes a justifiable perception in all jurisdictions that the ADA is unfair and arbitrary in its application. A failure by the Court to decide whether reproduction is a major life activity will also cause needless inefficiency in jurisdictions, like the Second and Tenth Circuits, where the issue has not yet been decided.6

5 Courts in the Second Circuit have discussed whether reproduction is a major life activity, but have not decided the issue. E.g., Lehmuller v. Incorporated Village of Sag Harbor, 944 F. Supp. 1087 (E.D. N.Y. 1996); Alexandru v. Northeast Utilities Serv. Co., No. 3:95CV461, 1996 WL 684421 (D. Conn. 1996).

C. The Question of Whether Reproduction is a Major Life Activity is Especially Well-Suited for Review Because It is a Neatly Circumscribed and Typically Dispositive Issue of Law.

The Appeals Court admitted that "the question [of whether reproduction is a major life activity] is very close." (11a) On the one hand, as the Appeals Court explains, conceiving and raising children are extremely important activities in our society; Congress envisions a definition of "disability" beyond old-fashioned concepts of "handicap"; reproductive disorders are included among the regulation's roster of physical impairments; the regulation's enumeration of major life activities is not meant to be exclusive; and reproduction is not completely dissimilar to the regulation's

6 The record presents no other theory according to which Ms. Abbott might be disabled under the ADA, other than the theory that she is substantially limited in the major life activity of reproduction, or that HIV-infection is per se a disability under the ADA. Questions presented numbered one and two are therefore dispositive in this case. Ms. Abbott may argue, on the contrary, that she was "regarded" by Dr. Bragdon as disabled, perhaps because he regarded her as contagious. Merely being regarded as contagious does not make one disabled under the ADA. Instead, Ms. Abbott would have to prove that Dr. Bragdon regarded her as substantially limited in one or more major life activities. See 42 U.S.C. § 12102(2)(C); 28 C.F.R. App. B, § 36.104 (explaining that "regarded as having such an impairment" means "treated . . . as having a physical or mental impairment that substantially limits a major life activity"); Cook v. State of R.I., 10 F.3d 17, 25 (1st Cir. 1993) (exploring whether a jury properly could have concluded that defendant "regarded plaintiff's condition as substantially limiting one or more of her major life activities"); Harris v. Thigpen, 941 F.2d 1495, 1524 (11th Cir. 1991) (concluding that HIV-infected prisoners were handicapped because the prison regarded them as unable to engage in the major life activities of learning and working); Doe v. Centinela Hosp., No. CV 87-2514, 57 USLW 2034 (D. Cal. 1988) (HIV-infected individual regarded as substantially limited in the ability to learn). There is no evidence at all that Dr. Bragdon regarded Ms. Abbott as substantially limited in any major life activity, nor did Ms. Abbott argue below that Dr. Bragdon regarded her as substantially limited in any major life activity.

enumerated major life activities of performing manual tasks, walking, seeing, hearing, and so forth. See 28 C.F.R. § 36.104.

On the other hand, many healthy, intelligent, normal people choose never to have children, unlike frequent and necessary activities such as performing manual tasks, walking, seeing, hearing, and so forth. With respect to the major life activity of working, millions of Americans work every day, not as a lifestyle choice, but because they must earn a living. That is why working is included as a major life activity under the ADA. The same cannot be said for reproduction. In addition, viewed as a whole, the regulations indicate that the Attorney General did consider reproductive issues, see 28 C.F.R. App. B, § 36.104 (reproductive system disorders are impairments under ADA), and concluded that although reproductive disorders are "physical impairments," reproduction is not itself a major life activity, see 28 C.F.R. § 36.104. Activities such as eating and sleeping, which also are not on the regulation's list of major life activities, are much more analogous to activities on the list, than is reproduction.7

D. The Question of Whether Reproduction is a Major Life Activity is Sufficiently Important to Warrant the Attention of the Court.

Ms. Abbott may argue that although the issue of

7 By reviewing this issue, the Court may also want to provide some guidance, at least indirectly, on how courts should treat other potential candidates for major life activities, such as "interacting with others," and "caring for others." Compare EEOC Compliance Manual (CCH) § 902.3,¶ 6883, at 5311 (1995) (stating that interacting with others is a major life activity) and Dolton Elementary School, 694 F. Supp. at 444 (ability to interact with others is a major life activity) with Soileau v. Guilford of Maine, Inc., 105 F.3d 12 (1st Cir. 1997) (indicating that getting along with others, and interacting with others, are probably not major life activities) and Krauel, 95 F.3d at 677 (caring for others is not a major life activity).

whether reproduction is a major life activity has been reoccurring, and is likely to reoccur, it will not reoccur with sufficient frequency to warrant the attention of the Court. This is incorrect.

The incidence of infertility in countries like the United States is estimated at between 10% and 15%, or up to one in every six couples. (209a, 221a, 223a) Surveys show that there are approximately 4.9 million women between the ages of 15 and 44 in America who are infertile (221a), and who are thus "disabled" according to the First Circuit, but not the Eighth Circuit. Approximately $1 billion is spent annually by couples seeking to overcome infertility. (210a) The Court should therefore expect a significant increase in litigation under the ADA concerning conduct and/or accommodations of employers, employee benefit plans, and insurers toward individuals seeking and undergoing infertility treatments. See, e.g., Clapp v. Northern Cumberland Memorial Hosp., ___ F. Supp. ___ (D. Me. April 24, 1997) (ADA action by infertile woman alleging disability discrimination for denial of sick leave benefits); see also 42 U.S.C. § 12201(c); 29 C.F.R § 1630.4(e), (f); EEOC Interim Policy Guidance on ADA and Health Insurance (June 8, 1993).

Any doubts as to the importance of this issue are also substantially outweighed by the existing widespread conflict among federal courts, and by the fact that the issue is neatly circumscribed, ripe for review, and typically dispositive when it does arise. If the Court fails to decide this issue, it will also perpetuate needless and expensive uncertainty among ADA litigants and potential litigants, and contribute to a justifiable perception of fundamental unfairness in the application of the ADA.

II. BECAUSE THERE IS A CONFLICT AMONG THE CIRCUITS ON WHETHER ASYMPTOMATIC

INDIVIDUALS INFECTED WITH HIV ARE PER SE DISABLED, AND BECAUSE THIS IS A QUESTION OF THE UTMOST SIGNIFICANCE TO MANY MILLIONS OF AMERICANS, THE COURT SHOULD GRANT THIS PETITION.

A. Circuit Courts are in Conflict as to Whether Asymptomatic Individuals Infected With HIV are Per Se Disabled Under the ADA.

The Fourth Circuit has held that asymptomatic individuals infected with HIV are not per se disabled under the ADA.**8** The Ninth Circuit, and other courts, have held that asymptomatic individuals infected with HIV are per se disabled.**9** Some courts, recognizing that the wording of the ADA does not suggest that any physical impairment is, per se, a disability, have nevertheless concluded, in effect, that HIV infection is necessarily a disability because of its negative impact on the ability to procreate, or to interact with others.**10** In Arline, 480 U.S. at 282 n.7, this Court expressly left open the question of whether asymptomatic carriers of a virus such as HIV are disabled.

In this case, the Appeals Court found support for the

8 Ennis v. National Ass'n of Business & Educ. Radio, 53 F.3d 55, 59-60 (4th Cir. 1995); cf. also Runnebaum v. NationsBank of Md., N.A., 95 F.3d 1285, 1289 (4th Cir. 1996) (reaffirming that asymptomatic HIV is not a disability per se), reh'g en banc granted, opinion vacated (Dec. 3, 1996).

9 E.g., Gates v. Rowland, 39 F.3d 1439, 1446 (9th Cir. 1994); Cloutier v. Prudential Ins. Co. of America, ___ F. Supp. ___ (N.D. Cal. 1997); United States v. Morvant, 898 F. Supp. 1157, 1161 (E.D. La. 1995); Howe v. Hull, 873 F. Supp. 72, 78 (N.D. Ohio).

10 E.g., Kohn Nast & Graf, P.C., 862 F. Supp. at 1321; Cain, 734 F. Supp. at 679; Dolton Elementary School, 694 F. Supp. at 444-445. Support for this approach is found in various regulatory guidelines. E.g., 28 C.F.R. App. B, § 36.104; 29 C.F.R. App. § 1630.2(j) ("HIV infection [is] inherently substantially limiting").

view that HIV infection is per se a disability, in the legislative history of the ADA. (15a) The Appeals Court implies that on that basis alone, it would have held that Ms. Abbott is disabled. (15a-16a) By doing so it would have avoided the absurd result that if Ms. Abbott were, for example, 70 years old, and not limited by HIV in her ability to reproduce, then she would not have be protected under the ADA. Equally absurd is the fact that Ms. Abbott's inability to have children, which is purportedly the basis of her disability, played no role in Dr. Bragdon's decision to defer treatment outside his office. Cf. Hedberg v. Indiana Bell Tel. Co., Inc., 47 F.3d 928, 932 (7th Cir. 1995) (defendant not liable under ADA unless it knew of disability). Nevertheless, Dr. Bragdon was found liable for discriminating against Ms. Abbott "on the basis of disability." 42 U.S.C. § 12182(a). The decision of the Appeals Court is therefore fundamentally incoherent without the premise that HIV infection is the disability.**11**

B. Whether HIV Infection is Per Se a Disability is a Question of the Utmost Significance to Millions of Americans.

Ms. Abbott's experts in this case estimate that approximately 1,000,000 Americans are infected with HIV. Very many of these individuals are asymptomatic, and will fortunately remain asymptomatic for at least quite some time. It goes without saying that whether such asymptomatic persons are per se protected under the ADA from employment and public accommodation discrimination is a question of immense significance not only to them, but to their employers, to private owners of public accommodations, and to many, many others. (200a-201a) If the Court agrees that HIV

11 In addition, as previously noted, see note 6 supra, there is no other basis in the record that possibly supports a finding that Ms. Abbott is disabled, other than the theory that HIV infection is per se a disability, or the theory that Ms. Abbott is substantially limited in the ability to reproduce.

infection is per se a disability under the ADA, it would appear cruel beyond necessity for the Court, out of inchoate concerns for whether the issue is ripe for mature deliberation, to refuse to answer the question. If, on the other hand, the Court thinks that HIV infection is not per se a disability, then this is a case in which the courts of appeals are especially in need of guidance, as the weight of authority, except in the Fourth Circuit, is clearly that HIV infection is per se a disability.

C. By Deciding Whether HIV-Infection is Per Se a Disability, the Court Can Also Clarify a Significant Uncertainty as to the Role of Legislative History in Statutory Construction.

The ADA's legislative history reveals that many members of Congress thought, for whatever reason, that HIV infection would automatically be a disability; yet, the wording of the statute does not reflect it, and even suggests otherwise. The ADA itself was enacted after this Court left open in Arline, 480 U.S. at 282 n.7, the issue of whether asymptomatic carriers of a virus, such as HIV, are disabled. This is therefore an excellent opportunity for the Court to clarify for Congress and other courts the significance, if any, of legislative history, when such history seems inconsistent with the wording of the statute on a controversial political issue. In other words, perhaps lacking the votes in Congress to have expressly made HIV-infection a disability under the ADA, is it enough that legislative history may treat it as such?

III. THE COURT SHOULD REVIEW AND REVERSE THE APPEALS COURT'S DECISION ON THE ISSUE OF DIRECT THREAT, BECAUSE IT SETS A DANGEROUS, HIGHLY PUBLICIZED PRECEDENT, WHEREBY PRIVATE HEALTH CARE PROFESSIONALS WHO MAKE REASONABLE JUDGMENTS BASED ON THEN-CURRENT MEDICAL KNOWLEDGE MAY BE HELD LIABLE FOR CIVIL RIGHTS VIOLATIONS WITHOUT A TRIAL.

A. Dr. Bragdon Made a Reasonable Judgment, Based on Then-Current Medical Knowledge, that Filling Ms. Abbott's Cavity in His Office Would Have Posed a Direct Threat to the Health or Safety of Others.

The following sampling of facts in the record illustrate that, for purposes of summary judgment review, Dr. Bragdon raised a genuine issue of fact under 28 C.F.R. § 36.208(c), as to whether he made an objectively reasonable judgment, based on then-current medical knowledge, that filling Ms. Abbott's cavity in his office on September 16, 1994, would have posed a direct threat to the health or safety of others.[12]

1. In 1991, the Occupational Safety and Health Administration (OSHA) promulgated its Final Standard for Occupational Exposure to Bloodborne Pathogens, 56 Fed. Reg. 64004 (Dec. 6, 1991). These standards apply to dentists. See American Dental Ass'n v. Martin, 984 F.2d 823 (7th Cir. 1993), cert. denied, 114 S. Ct. 172 (1993). OSHA concluded that dental workers who have occupational exposure to blood or certain body fluids are "at risk" of contracting HIV, and that the rate of HIV infection is low, but "not insignificant." 56 Fed. Reg. at 64032. (81a-82a) OSHA specifically rejected the American Dental Association's contention that OSHA overestimated the occupational risk for dentists. Id. at 64092. (83a-84a) OSHA explained that empirical findings are compatible with a finding of a one in 1,000 risk to dentists of a

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12 For purposes of summary judgment review, "the evidence of the nonmovant [i.e., Dr. Bragdon] is to be believed, and all justifiable inferences are to be drawn in his favor." Anderson v. Liberty Lobby, Inc.,477 U.S. 242, 255 (1986). "Credibility determinations, the weighing of the evidence, and the drawing of legitimate inferences from the facts are jury functions, not those of a judge, whether he is ruling on a motion for summary judgment or for directed verdict." Id.

fatal illness as a result of occupational exposure to HIV infected blood, and that such a risk has "clearly [been] defined . . . as a significant risk." Id. OSHA therefore requires, and the CDC recommends, the taking of certain "universal precautions" (gloves, masks, handwashing, etc.). They are called "universal" in the sense that they are to be used for all patients, not in the sense that they eliminate the risk to dentists of contracting HIV. In fact, when Senator Daniel Moynihan inquired of the CDC in 1995 as to the efficacy for dentists of taking "universal precautions," the Director of the CDC referred Senator Moynihan to "the two latest articles" on the subject. (85a-86a) The first article concerned only cutaneous exposures to blood, and reported an approximately 50% reduction by taking universal precautions. (225a) The second considered parenteral exposures as well, and concluded that "the implementation of UPs [i.e., universal precautions] should reduce the risk of occupational HIV infection by . . .62%." (89a)

This means that according to OSHA, evidence indicates that Dr. Bragdon and his assistants have a significant risk of contracting HIV without taking universal precautions. According to the latest studies recognized by the CDC, Dr. Bragdon and his assistants reduce that risk by 62% -- a little over half -- by taking universal precautions. Most reasonable minds would agree that a 62% reduction in a significant risk of contracting HIV still leaves a significant risk. Accordingly, Dr. Bragdon made a reasonable judgment, based on then-current medical knowledge, that the performance of an invasive procedure, such as filling Ms. Abbott's cavity near the gum line, would have posed a direct threat pursuant to 28 C.F.R. § 36.208(c).

2. In 1992, the Food and Drug Administration (FDA) issued recommendations for the prevention of HIV transmission. The FDA recommends a twelve month deferral

period for all potential blood donors "who have had contact with blood and body fluids through percutaneous inoculation (such as injury or accidental needlestick) or through contact with an open wound, non-intact skin, or mucous membrane during the preceding 12 months." (97a, 90a) This means that whenever a dentist has contact with any patient's blood by accidental needlestick or other sharps injury, the FDA, on account of concern for the transmission of HIV, recommends that the dentist not be permitted to donate blood for twelve months, to ensure that blood tests will detect HIV-antibodies if he is infected.**13** It is therefore reasonable to infer that the FDA, like OSHA, thinks there is a significant risk to dentists of contracting HIV when they are exposed to the blood of their patients.

Every time Dr. Bragdon fills a cavity such as Ms. Abbott's, there is a significant opportunity for him to be exposed to his patient's blood. See 56 Fed. Reg. at 64092 (82a) ("Dentists . . . are continually exposed to blood and bloody saliva during almost all dental procedures."). For example, during the injection of local anesthetic, accidental needlestick injuries to Dr. Bragdon occur before, between, and after injections, as a result of unexpected patient movements, such as biting down or flinching. (69a, ¶ 7; 77a-78a; 138a-139a; 176a) One of Ms. Abbott's experts testified that, for dentists, 1.5 accidental needlesticks per 100 injections, is a reasonable approximation. (154a-155a, ¶ 16) A startled patient can cause instruments, such as explorers (the "shepherd's crook" used to examine teeth), to be driven into the bone of the dentist's finger. (77a, ¶ 7; 139a) The CDC reports that during routine dental procedures, "contamination of saliva with blood is predictable [and] trauma to health-care workers' hands is common." MMWR, vol. 37, no. 24, p. 379

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13 Blood tests used to determine if someone is HIV-positive actually detect the presence of HIV-antibodies, which typically do not develop until one to six months after infection.

(June 24, 1988). Dr. Bragdon testified that even doing his best to implement universal precautions, he sustains sharps injuries, most of which draw blood, at the rate of several times a week. (99a-100a) In one study, thirty-five percent of dentists reported between two and fifteen sharps injuries per month. (125a) When drilling a cavity near the gum line, it is not unusual for splatters of blood to reach the dentist. (70a, ¶ 9;102a) The drilling process itself creates an aerosol mist of tiny droplets of blood and bloody saliva that drifts up into the face of the dentist. (69a-70a) Consequently, when filling cavities, and performing other so-called "routine" procedures, it is not at all unusual for the blood and mucous membranes of dentists to be exposed to the blood of their patients. (70a, ¶ 12, 72a-74a)

A reasonable inference from the FDA recommendations concerning deferral periods following exposure to a patient's blood, and from the likelihood of Dr. Bragdon being exposed to the blood of a patient when filling a cavity near the gum line, is that there was a direct threat to Dr. Bragdon within the meaning of 28 C.F.R. § 36.208(c).

3. In June 1994, the CDC reported thirty-seven confirmed cases of occupational transmission of HIV to health care workers (including four to non-surgical physicians), and seventy-eight suspected occupational transmissions of HIV to health care workers, including seven suspected occupational transmissions of HIV to dental workers. (104a-107a) The seven suspected occupational transmissions of HIV to dental workers are cases in which it is reasonable to infer that transmission occurred, because the dental workers suffered occupational exposures to HIV-infected blood, and follow-up investigation by the CDC uncovered no non-occupational risk factors for the HIV-infected workers. (105a) In other words, the seven dental workers who were infected with HIV were "investigated and are without identifiable [non-occupational]

behavioral or transfusion risks." (110a n.3; 111a n.3) The CDC does not, however, refer to such cases as "confirmed," because unlike the thirty-seven confirmed cases of occupational transmission of HIV to health care workers, the infected dental workers did not have blood tests done at the time of exposure confirming that they were HIV-negative at that time. (Id.)**14**

Moreover, in the same June 1994 report, the CDC cautioned that its passive surveillance system for documenting occupational transmissions of HIV "most likely does not reflect the full extent of occupational transmissions," and that estimates are that "only 10% to 60% of percutaneous injuries are reported" (emphasis added). (105a) Based on this CDC report, it was reasonable for Dr. Bragdon to conclude that perhaps as many as seventy dental workers, and at least seven, had already suffered occupational transmissions of HIV, and therefore, there would have been a direct threat to him and his staff while performing invasive procedures on Ms. Abbott in his office.

4. In 1991, the CDC reported that a Florida dentist, despite using barrier precautions, transmitted HIV to five of his patients, between 1987 and 1989. (111a-1 - 130a) The routine procedures in question included restorative fillings, prophylaxes, and simple extractions. The CDC explained that

> [a]ll five patients received multiple injections

14 The Appeals Court dismissed the relevance of these seven infected dental workers by playing on the word "possible." Specifically, although the CDC refers to these suspected cases of HIV transmission as "possible" cases, it is obvious from the context of the CDC report that this does not mean "possible" in the sense that "anything is possible." In legal terminology, what the CDC calls "documented" cases, and what the Appeals Court and petitioner call "confirmed" cases, are on the order of "beyond a reasonable doubt," whereas "possible" cases are those in whichthe preponderance of the evidence suggests that occupational transmissions of HIV occurred.

> of local anesthetic, and a sharps injury during anesthetic administration could have resulted in contamination of the syringe apparatus with the dentist's blood. . . . A sharps injury could also result in direct contact of the dentist's blood with the patient's inflamed or nonintact oral tissues during the invasive procedures. Although the dentist began to routinely wear gloves in 1987, gloves do not prevent most injuries caused by sharp instruments.

(126a)

The CDC updated this study in 1993, and concluded that a sixth patient was also infected with HIV while receiving care from this dentist. Unlike the other patients, "this patient had neither dental extractions nor root canal therapy." (132a) Other than X-rays and a cleaning, there was only a single surface restorative filling (131a), just like the "routine procedure" at issue in this case.

In addition, experts agree that the risk of transmission of HIV from patient to dentist is greater than the risk of transmission of HIV from dentist to patient. For example, Dr. Molinari's article in the October 1993 issue of the Journal of the American Dental Association reports: "The risk of transmitting HIV from patient to HCW [health care worker] is much higher than the risk of transmitting from HCW to patient." (137a) Dr. Molinari later reiterated his view that "the danger is much greater for dentists and dental care workers than it is for patients" (emphasis added). (139a)

Given the documented transmissions of HIV from dentist to patients while filling a simple cavity and other "routine procedures," given that courts are in agreement that there is a direct threat to patients from HIV infected health

care workers, including dentists,[15] and given experts' opinion that the risk to dentists is much greater than the risk to patients, it was again reasonable for Dr. Bragdon, or anyone else, to conclude that filling Ms. Abbott's cavity near the gum line would have posed a direct threat to him and his staff.

5. Dr. Bragdon also introduced as evidence an affidavit from Leon Kelleher, D.D.S. Dr. Kelleher directs a group of seventeen dentists who treat over 100 HIV-positive patients in the Chicago area. Dr. Kelleher testified that their "standard operating procedure is to avoid the use of aerosol producing instrumentation [i.e., the dentist's high speed drill] in known HIV+ cases." (140a, 143a) According to Dr. Kelleher, "[p]atients on whom the use of the high speed handpiece [i.e., the drill] is unavoidable are done with high volume evacuation under laminar flow conditions with hood or full face protection and remote air source for the operator." (143a) Dr. Kelleher's group adopted its protocols because of the results of a 1991 study conducted by Drs. Johnson and Robinson at Stanford University School of Medicine. (Id.) Drs. Johnson and Robinson reported that infectious HIV can be isolated from aerosols generated from HIV infected blood, and concluded that

> dentists . . . should avoid techniques which generate such aerosols . . . with patients known to be infected with HIV. Where such procedures are unavoidable, personnel should consider using high efficiency filtration masks and systems for containing aerosols.

(149a)

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15 E.g., Bradley v. Universtiy of Tex. M.D. Anderson Cancer Ctr., 3 F.3d 922 (5th Cir. 1993), cert. denied, 114 S. Ct. 1071 (1994); Mauro v. Borgess Medical Ctr., 886 F. Supp. 1349 (W.D. Mich. 1995); Doe v. Washington Univ., 780 F. Supp. 628 (E.D. Mo. 1991).

Rather than filling Ms. Abbott's cavity in his one-dentist office in the outskirts of Bangor, where such high efficiency filtration devices are not available, Dr. Bragdon wanted to defer treatment to a local hospital setting, where he had reason to believe they were available. (101a) This was a reasonable judgment by a health care professional. Yet, without a trial, and despite conflicting expert affidavit's (150a-159a), two courts have now determined as a matter of law that Dr. Bragdon unlawfully discriminated against Ms. Abbott. Now pending in District Court is Ms. Abbott's application as a prevailing party for attorneys fees and litigation expenses in the amount of $205,190.63. The fact that Dr. Bragdon may owe over $200,000 for wanting to take the same precautions as are routinely taken by dentists in big cities, and that federal courts are in effect compelling him to take risks at work that other dentists routinely do not, is truly Orwellian, and deserving of this Court's attention.

6. In affirming the summary judgment against Dr. Bragdon, the Appeals Court held that all of the evidence presented by Dr. Bragdon, taken individually and cumulatively,**16** did not raise a genuine issue for trial. The

16 Dr. Bragdon presented other compelling evidence as well. For example, he presented the direct affidavit testimony of Sanford F. Kuvin, M.S., M.D., D.T.M. & H. Dr. Kuvin, whose qualifications under Rule 702 as an expert witness on infectious diseases were not challenged , corroborated the sources of information already discussed, and concluded that there would have been a direct threat to Dr. Bragdon. (150a-160a) Dr. Kuvin also testified that according to CDC recommendations regarding the danger of tuberculosis ("TB"), dentists should decline to perform aerosol-generating procedures on an HIV-positive patient without high-efficiency particulate air filtration that was unavailable to Dr. Bragdon in his office. (152a-154a) Using a form of analysis recognized by the Fourth Circuit in Doe v. University of Md. Medical Sys. Corp., 50 F.3d 1261 (4th Cir. 1995), and empirical data available to Dr. Bragdon in 1994, Dr. Kuvin further testified that a conservative estimate of the risk that a dentist will receive at least one fatal, accidental needlestick, during 30 years of practice giving approximately one injection per working day to an HIV infected patient, is one in ten. (154a-156a) For the sake of comparison, the risk of sustaining a fatal, accidental needlestick, while giving just one injection to an HIV infected patient, is slightly greater than the risk of having a fatal parachute accident while skydiving. (161a-162a, 164a, 165a-166a)

Appeals Court arrived at this result, ostensibly, by attaching a continuing presumption of correctness to the conclusions that it thought were implicit in the 1993 Guidelines. This is what the 1993 Guidelines actually say:

> This document updates previously published CDC recommendations for infection-control practices for dentistry (1-3) and offers guidance for reducing the risks of disease transmission among dental health-care workers (DHCWs) and their patients. . . .
>
> . . .
>
> A set of infection-control strategies common to all health care delivery settings should reduce the risk of transmission of infectious diseases caused by bloodborne pathogens such as HBV and HIV. . . .
>
> . . .
>
> For both HBV and HIV, the precise event or events resulting in transmission of infection in the dental setting have not been determined; . . .
>
> . . .
>
> Additional information is needed for accurate assessment of factors that may increase the risk for transmission of bloodborne pathogens and other infectious agents in a dental setting.

(182a, 183a, 184a, 199a)

The Court will search in vain in the 1993 Guidelines (181a-199a) for any more definitive statement of the significance of the risk to dentists, or of the rationality or

legality of taking additional precautions while working on persons known to be HIV positive. In fact, although the plaintiffs vaunt the significance of the 1993 Guidelines, they did not cite in their appellate briefs a single word from that document. Nor, apart from two references in the United States' brief to a 1993 CDC article about the risk of occupational infection in operating and delivery room settings (also cited by Dr. Bragdon in his brief), did the United States, Ms. Abbott, or any of their health department amici, cite a single word from any published CDC source, or even a single word from any of their own published sources.

The outcome of this case was therefore determined by the application of an extraordinarily unusual standard of review at summary judgment, and not by the failure of Dr. Bragdon to present evidence, including direct expert witness testimony,**17** that would have otherwise entitled him to a trial under normal summary judgment principles. Cf. Doe v. Johnston, 476 N.W.2d 28, 31 (Iowa 1991) (materiality of risk was properly a jury question when conflicting expert testimony put risk of contracting HIV between 1/100,000 and 1/1,000,000); cf. also Carter v. Temple-Inland Forest Products Corp., 943 S.W.2d 221 (Tex. App. 1997) (reasonableness of party's fear of developing cancer was properly a jury question when the evidence was that the risk of developing cancer was between 1/100 to 1/500,000).**18**

B. Ironically, Dr. Bragdon, More Than Ms. Abbott,

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17 See note 16 supra.

18 Another clear indication that Dr. Bragdon would have survived summary judgment on normal summary judgment principles, is that while the Appeals Court did its best to discount, ignore, and belittle the evidence presented by Dr. Bragdon, it did not indicate that the outcome would have been the same under a standard of review more favorable to him. In light of how narrowly the Appeals Court attempted to write on the issue of direct threat, the Appeals Court surely would have added such a proviso if it thought it were true.

Must Confront Myth and Prejudice in this Case.

It is sometimes assumed that among the poorly educated, there is an irrational fear and prejudice that HIV is easily transmitted. Whether or not this is true, there is most certainly a myth and prejudice among the well educated, including those like ourselves who have had friends or relatives become infected with HIV or die of AIDS. The myth is that apart from activities like unprotected sex and sharing dirty needles, science has shown that the risk of transmission of HIV to be nil, even for dentists working with sharp instruments in bloody mouths. The prejudice is that dentists or doctors who think otherwise, or who want to take significant additional precautions when working with even small amounts of HIV infected blood, must be ignorant, homophobic, stigmatizing, cowardly unethical, and/or uncaring.

This myth and this prejudice is perfectly exemplified by a recent cover story on this case in the American Bar Association Journal, in which the author assumes and/or implies for his audience that there is clear scientific evidence of no significant risk to dentists. He writes:

> Although the evidence is to the contrary, dentists may perceive greater risks of contracting HIV by coming into contact with a patient's blood. A typical dental examination is a more invasive procedure than a routine physical exam and often draws blood, even during routine cleaning.

(207a - emphasis added) The author, of course, does not explain what is the "evidence to the contrary," or in what medical journal or CDC publication it can be found.

The vital point for the Court to understand is that no-where in the record has the CDC, any of Ms. Abbott's four experts, or any of the many amici public health organizations, been able to point to a single, scientific, reasoned analysis that was available to Dr. Bragdon, concluding that the risk to a dentist filling a cavity (or performing other procedures which routinely draw patients' blood) is insignificant, or that because of a crisis in the availability or cost of dental care for HIV-infected individuals, dentists must be compelled by federal law to perform invasive procedures in their offices on patients known to be infected with HIV, without taking significant precautions beyond those recommended by the CDC for all patients. There is no such analysis. It is a myth that there is, and this myth serves a political agenda, just as much as the myth that AIDS is a gay disease serves a differing political agenda.**19**

Ms. Abbott herself plays upon this myth by repeatedly making the fallacious argument that the risk to dentists is nil because, except for the seven suspected transmissions of HIV to dental workers documented by the CDC, and the six transmissions to dental patients also documented by the CDC, the CDC has never documented another case of HIV transmission in the estimated over "one billion dental procedures" performed by "250,000 other dentists" in this country in "the last fourteen years." (Appellee's Br. at 8)

But what kind of argument is this, when people can be

19 The morally righteous tone to the plaintiffs' political agenda is illustrated by the response of one of Ms. Abbott's experts to the question of whether Dr. Bragdon should be legally compelled to treat HIV-infected patients, assuming there is a substantial likelihood of a transmission of HIV to him or his staff once every 10 years, or even once every year. His answer was "Yes," "Life is a risk," "[T]here's obviously a risk, and I think he should provide services. I'm not saying when you provide services you provide it risk free and nothing happens. So the time frame makes no difference to me." (170a-171a)

HIV-positive for many years without knowing it, and the CDC admits that its passive surveillance system for documenting HIV transmissions to dentists underreports by as much as 90%? (105a)

Scientifically, the argument is specious, but rhetorically, it helps reinforce the myth that it is nigh unto impossible to transmit HIV, outside of unprotected sex and dirty needles. The truth is, however, a little drop of blood on an open wound or mucous membrane can transmit HIV, although in light of the cruelty of many in society to those with HIV, we prefer to ignore it.**20** But this does not mean that the government ought to be in the business of compelling private health care providers to act against their reasonable judgments, even if reasonable health care providers disagree about the significance of a risk.

C. The Appeals Court's Decision Sets a Very Bad Precedent that Will Have Deleterious Effects On Efforts to Build an Improved, Coherent Administrative System for the Regulation of Small But Significant Health Risks.

An expert in administrative law recently observed that "serious problems currently plague efforts to regulate small, but significant, risks to our health." Stephen Breyer, Breaking the Vicious Circle, 10 (Harvard Univ. Press 1993). The Appeals Court's opinion, if left to stand as law, will exacerbate those problems.

More precisely, this case is being watched carefully by state and national public health agencies and health care providers (180a), including, of course, the many national and state agencies and associations that filed amicus briefs in the

20 The CDC reports that "visible blood on device" is a significant factor for increasing the risk of HIV infection for a health-care worker following a percutaneous injury. MMWR, vol. 44, no. 50, p. 929-932 (Dec. 22, 1995).

Appeals Court. Yet, not a single one of these organizations referred the Appeals Court to any official published source in which any of them tried to analyze in an authoritative, scholarly fashion, the significance of the risk to dentists, and what, if any regulation, is necessary on account of it. That is why the Appeals Court was reduced in all honesty to relying on what it said merely "seem[ed] to be implicit" in the 1993 Guidelines, and a negative inference from the fact that no public health authority has said "it is unsafe" for dentists.**21** In effect, therefore, some CDC officials have thus far succeeded, with no meaningful regulatory analysis, to enact and to enforce a new legal standard whereby a private doctor or dentist shall no longer follow his or her own reasonable judgment as to the safety of performing invasive procedures in his or her office. According to this standard, the doctor or dentist must follow a majority rule and/or divine what merely seems to be implicit in non-committal agency guidelines. At the same time, the amici public health officials have learned that it is unnecessary to issue clearly reasoned policy directives through publicly accountable processes, in order to effectuate new and remarkable policy.

This manner of regulating is the complete antithesis of the carefully reasoned, scientifically based, multidisciplinary approach envisioned by the author of Breaking the Vicious Cycle. The "regulatory process" followed by the CDC in this case, which is to publish non-committal guidelines, and then to permit its officials to make ad hoc stronger claims in private civil litigation, does not engender trust and confidence, but only brings home a political reality to health care providers that it is pointless, and even illegal, for them to critically digest and apply for themselves official sources of information about HIV found in scientific journals and CDC reports. This

21 The Appeals Court apparently decided to overlook the official CDC reports relied upon by Drs. Kuvin and Bragdon, as well as OSHA's conclusion that there is evidence of a significant risk to dentists.

dangerous state of affairs should be scrutinized carefully by the Court.

D. The Issue of the Proper Standard of Review Under Title III of Private Health Care Providers' Determinations of Direct Threat is an Issue of Nationally Reoccurring Significance.

Ms. Abbott's experts estimate that approximately one million individuals in the United States are infected with HIV. Thousands of times, every day, health care providers of every sort face the prospect of being vilified if they take significant additional precautions (which may include the deferral of treatment to another time or to a different location) when treating a person known to be infected with HIV. (180a, 200a) Numerous federal cases have already been filed when health care providers would not treat an HIV-infected patient without significant additional precautions, e.g., Sharrow v. Bailey, 910 F. Supp. 187 (M.D. Pa. 1995) (one-day deferral of surgery in order to obtain protective suits for surgical staff), or apparently, would not treat a patient at all.**22** Surveys show that many more suits are likely to be filed. (205a-206a)**23** Patients and the medical community in every federal circuit deserve to know how the balance between them will be struck under the ADA. Will courts defer to reasonable judgments of private health care providers, even if public health organizations disagree? Or, if there is room for reasonable

22 E.g., A.R. v. Kogan, ___ F. Supp. ___ (N.D. Ill. May 29, 1997); Hoepfl v. Barlow, 906 F. Supp. 317 (E.D. Va. 1995); United States v. Morvant, 898 F. Supp. 1157 (E.D. La. 1995).

23 Law Professor Scott Burris of Temple University reports that there are "thousands and thousands of cases" of HIV-infected individuals experiencing what they think is discrimination by dentists. While some ofthese cases may in fact represent unlawful discrimination, many are probably cases in which dentists are making reasonable professional judgments based on current medical knowledge of how HIV can be transmitted during dental procedures. In any event, the magnitude of the issue is evident.

experts to disagree, do the views of public health organizations, such as the CDC, take precedence? And if so, must these views be based upon critical analyses found in official writings, or is it enough that they seem to be implicit, or are put forth for the first time in private civil litigation?

E. Neither Arline, the ADA, Regulations, nor legislative History, Suggests that Private Health Care Providers Should Be Held Liable for Making Reasonable Judgments Based On Then-Current Medical Knowledge.

In deciding that courts should "normally defer to the reasonable medical judgments of public health officials," the Court in Arline was undoubtedly sensitive to the issue of the proper role for the reasonable medical judgments of private health care providers. Arline, 480 U.S. at 288 n. 18 ("we do not address[] the question whether courts should also defer to the reasonable judgments of private physicians . . ."). This sensitivity suggests that the Court was concerned with preserving the exercise of reasonable professional judgment by private health care providers. The ADA itself contains no wording to suggest that Congress intended to abrogate the exercise of reasonable professional judgments by private health care providers, even when balancing the interests of disabled persons. The applicable regulation states that when "determining whether an individual poses a direct threat . . ., a public accommodation must make an individualized assessment, based on reasonable judgment . . . ." 28 C.F.R. § 36.208(c) (emphasis added). This seems literally to contemplate the exercise of reasonable professional judgment by private persons who provide public accommodations. The legislative history of the "direct threat" provision in title III of the ADA states that that "provision is identical to one added in the employment section [i.e., title I of the ADA], and the discussion of this issue there applies here as well." H.R. Rep.

No. 101-485(III) at 62 (1990), 1990 U.S.C.C.A.N. at 485. The discussion of the issue in the employment section states that the "Committee intends to codify the direct threat standard used by the Supreme Court in . . . Arline." Id. at 34, 1990 U.S.C.C.A.N. at 457. That brings the Court back to Arline, with nothing in this circle of authorities to suggest that a dentist may be liable under the ADA for making a reasonable judgment based on then-current medical knowledge.**24**

F. The Decision by the Appeals Court is Literally Dangerous as a Matter of Public Health Policy.

Dr. Bragdon's view, which was a matter of public record before this lawsuit began, is that Maine, like other places, should invest the resources necessary to maintain designated HIV/AIDS clinics which include comprehensive dental care.**25** (168a-169a) That way, in Dr. Bragdon's opinion, "[w]e can help provide the best possible dental care for HIV/AIDS patients while at the same time providing the maximum protection to the uninfected citizens of Maine." (169a)

Although anecdotal, there has already been a striking example of the danger of taking away the right of a professional to exercise reasonable judgment when treating a person known to be infected with HIV. Approximately one

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24 Ironically, the First Circuit has decided that the intent under the ADA to codify Arline suggests that the burden is on plaintiffs to show that they do not pose a direct threat. E.E.O.C. v. Amego, Inc., 110 F.3d 135, 143 (1st Cir. 1997). If the First Circuit is correct in Amego, then the decision in Abbott v. Bragdon conflicts with Arline, and the Court should review this case on that basis alone.

25 Cf. Lasser v. Rosa, 654 N.Y.S.2d 822, 823 (App. Div. 1997) (dentist who offered HIV infected plaintiff referral to clinic which specialized in the treatment of HIV positive patients, and who explained that in his professional judgment, these "clinics offered precautions and accommodations beyond the minimum standards prescribed by the [CDC]," was not liable for discrimination based on HIV status).

year ago, Dr. Bragdon was contacted by a dentist who was presented with an apparently asymptomatic patient infected with HIV. Dr. Bragdon nevertheless urged his colleague to take extra precautions by deferring treatment until additional medical tests could be conducted on the patient. Although Ms. Abbott's experts would argue that such precautions are unnecessary, it turned out that, unbeknown to this patient, the state of his immune system had recently deteriorated substantially, and according to the patient's doctor, if the dentist had simply done the dental work that day, it may well have been fatal. Many years ago, before Dr. Bragdon started dental school, he saved the life of a laboratory technician handling a deadly chemical warfare agent by insisting on the additional precaution of double gloving, when that was not the standard protocol. Even health care providers specifically preferred by HIV-infected patients take significant additional precautions to protect themselves.**26** Thus, in a literal sense, the Appeals Court opinion is dangerous to patients and to health care workers who will undoubtedly be discouraged from deferring non-emergency treatment to settings where maximum precautions may be taken.

Finally, it is important to note that the Appeals Court's argument in its footnote 4, that this case does not address the issue of whether it is illegal for dentists to take additional precautions, is logically mistaken, and distorts Dr. Bragdon's arguments below. Contrary to the Appeals Court's premises in footnote 4, Dr. Bragdon did not claim the right to deny entirely routine dental treatment to patients with HIV, and he did not argue that his offer to treat Ms. Abbott in a hospital was "gratuitous." Instead, Dr. Bragdon maintained that under the ADA, whether the risk in a hospital setting would have been significantly less is legally irrelevant, provided he made an objectively reasonable judgment that there would have been a direct threat in his office. He explained:

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26 See confidential document lodged with the Court.

It is Dr. Bragdon's view that, legally, he had no duty to fill the cavity in his office, and whether he had a legal duty to fill it in a hospital is irrelevant. Ethically, however, Dr. Bragdon believes that he had a duty to treat Ms. Abbott. He therefore offered to treat her in a hospital setting where he believed he could most fully mitigate the risk, and where he would be more confident and comfortable.

(Appellant's Br. at 36-37)

The Appeals Court's statement that it is not addressing the legality of additional precautions, which it added in an errata sheet issued the day after Dr. Bragdon's petition for rehearing was denied, is simply an attempt, like the final sentence of the opinion, to write more narrowly than the case deserves, and very much more narrowly than this case is being received by millions of Americans. For if Dr. Bragdon did not even manage to raise a genuine issue of direct threat, on what legal grounds are other health care providers able to justify the taking of any significant additional precautions with persons known to be infected with HIV, such as, for example, deferring treatment to specialized locations outside the office, deferring treatment in order to obtain temporary, specialized equipment in the office, or deferring treatment to special times and/or permanent locations inside the office?

CONCLUSION

WHEREFORE, Dr. Bragdon requests that the Court agree to review the questions presented in this case.

Respectfully submitted,

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UNITED STATES COURT OF APPEALS
FOR THE FIRST CIRCUIT

No. 96-1643

SIDNEY ABBOTT, ET AL.,
Plaintiffs, Appellees,

v.

RANDON BRAGDON, D.M.D.,
Defendant, Appellant.

APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MAINE

[Hon. Morton A. Brody, U.S. District Judge]

Before

Selya, Circuit Judge,
Aldrich, Senior Circuit Judge,
and Stahl, Circuit Judge.

John W. McCarthy, with whom Brent A. Singer and Rudman & Winchell were on brief, for defendant.
Peter M. Sfikas, Mark S. Rubin and Jill A. Wolowitz on brief for American Dental Ass'n, amicus

curiae.

Bennett H. Klein and David G. Webbert, with whom Gay and Lesbian Advocates and Johnson, Webbert & Laubenstein were on brief, for plaintiff Sidney Abbott.

John E. Carnes, Commission Counsel, on brief for intervenor-plaintiff Maine Human Rights Commission.

Samuel R. Bagenstos, Attorney, U.S. Dept. of Justice, with whom Deval L. Patrick, Assistant Attorney General, and Jessica Dunsay Silver, Attorney, were on brief, for intervenor-plaintiff United States of America, amicus curiae.

Robert Greenwald and AIDS Action Committee on brief for R.I. Dept. of Pub. Health, Bureau of Health of the Me. Dept. of Human Servs., American Pub. Health Ass'n, Ass'n of State and Territorial Dental Dirs., and Ass'n of State and Territorial Health Officials, amici curiae.

Donna Levin on brief for Mass. Dept. of Pub. Health, amicus curiae.

March 5, 1997

SELYA, Circuit Judge. In this case of first impression, the district court granted summary judgment in favor of plaintiff-appellee Sidney Abbott, an HIV-positive woman, on her claim that defendant-appellant Randon Bragdon, a dentist, violated the Americans with Disabilities Act (the ADA) by refusing to treat her in his dental office.[1] Dr. Bragdon appeals.

[1] Though we write for simplicity's sake as if Ms. Abbott were the sole plaintiff, we note that the federal government and the Maine Human Rights Commission intervened as plaintiffs below. We note, too, that Ms. Abbott prevailed upon a parallel claim under the Maine Human Rights Act (MHRA), 5 Me. Rev. Stat. Ann. tit. 5, § 4592 (West 1989). Interpretation of both the ADA and the MHRA has "proceeded hand in hand," Soileau v. Guilford of Me., Inc., ___ F.3d ___, ___ (1st Cir. 1997) [No. 96-1796, slip op. at 6], and the parties here do not suggest any distinction between the two statutes that might affect this appeal. Consequently, we need not discuss the MHRA further.

Because we agree with the district court that Ms. Abbott is disabled within the purview of the ADA and that providing routine dental care to her (i.e., filling a cavity) would not have posed a direct threat to Dr. Bragdon's health or safety, we affirm.

I. BACKGROUND

The events giving rise to this litigation are straightforward. On September 16, 1994, Ms. Abbott arrived at Dr. Bragdon's office in Bangor, Maine for a scheduled appointment. On her patient registration form, she indicated that she was infected with the HIV virus. People may be HIV-positive for years without manifesting the set of symptoms commonly known as AIDS, and Ms. Abbott was asymptomatic at the time.

Dr. Bragdon performed a dental examination and discovered a cavity. He told Ms. Abbott that, pursuant to his infectious disease policy, he would not fill her cavity in his office, but would only treat her in a hospital setting. Though he would charge his regular fee, she would have to bear the additional cost of whatever the hospital charged for the use of its facilities. Ms. Abbott refused the offer and instead filed a complaint under the ADA. See 42 U.S.C. § 12182(a) (1994).

After pretrial discovery concluded, the

parties cross-moved for summary judgment. The district court ruled that Ms. Abbott was substantially limited in a major life activity (reproduction) and thus was disabled for purposes of the ADA. See Abbott v. Bragdon, 912 F. Supp. 580, 587 (D. Me. 1995). The court then concluded that the relatively routine treatment needed by Ms. Abbott could be delivered safely in Dr. Bragdon's office. See id. at 591. Consequently, the court granted Ms. Abbott's motion for summary judgment. See id. at 595-96. This appeal followed.

II. THE SUMMARY JUDGMENT STANDARD

The Civil Rules authorize federal courts to grant summary judgment only when "there is no genuine issue as to any material fact and . . . the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c). Confronted with a properly documented motion for brevis disposition, the nonmovant must establish the existence of a fact that is both genuine and material in order to ward off the entry of an adverse judgment. See Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986); Garside v. Osco Drug, Inc., 895 F.2d 46, 48 (1st Cir. 1990). Appellate review of the district court's award of summary judgment is plenary, and, in keeping with this standard, we are not wedded to the district court's rationale but may affirm on any alternative ground made manifest by the record. See Hachikian v. FDIC, 96 F.3d 502, 504 (1st Cir. 1996).

In assaying the record, we are guided by the same tenets that guided the lower court. Thus, we are duty bound to indulge all reasonable inferences in favor of the party opposing summary judgment. See id. This generous outlook notwithstanding, we must disregard improbable or overly attenuated inferences, unsupported conclusions, and rank speculation. See Smith v. F.W. Morse & Co., 76 F.3d 413, 428 (1st Cir. 1996);

Medina-Munoz v. R.J. Reynolds Tobacco Co., 896 F.2d 5, 8 (1st Cir. 1990).

III. THE QUESTION OF DISABILITY

The ADA sends a clear message to those who operate places of public accommodation: you may not discriminate against individuals in the full and equal enjoyment of services on the basis of a disability. See 42 U.S.C. § 12182(a). Although a dental office qualifies as a place of public accommodation, see id. § 12181(7)(F); see also 28 C.F.R. § 36.104 (1996), the ADA protects only disabled patients against discrimination, and any attempt to invoke the ADA against a practicing dentist must start with an investigation into the patient's status. We turn, then, to the question of whether Ms. Abbott, who was infected with HIV but was asymptomatic, had a disability cognizable under the ADA.

This question is first and foremost a question of statutory construction which we review de novo. See Strickland v. Commissioner, Me. Dept. of Human Servs., 96F.3d 542, 545 (1st Cir. 1996). In all such cases, we begin with the words of the statute, and we approach them with an understanding that our role is not to set public policy, but, rather, to discern the legislature's will. See, e.g., United States v. Gibbens, 25 F.3d 28, 33 (1st Cir. 1994).

A. The Plaintiff's Burden.

Disability is not a unitary concept under the ADA. Instead, the statute limns three subsets of disability, any one of which is sufficient to trigger the act's protections. In this regard, the ADA states:

> The term "disability" means, with respect to an individual – (A) a physical or mental impairment that substantially limits one or more of the major life activities of such individual; (B) a record of such an impairment; or (C) being regarded as

having such an impairment.

42 U.S.C. § 12102(2). This case, as Ms. Abbott postures it, implicates the first subset of the statutory definition.2 Thus, she must prove three things: first, that she has a "physical or mental impairment"; second, that this impairment adversely affects "a major life activity"; and third, that it does so to a significant extent (or, put more precisely, that the impairment "substantially limits" her ability to engage in the particular major life activity).

B. The Impairment.

The plaintiff easily clears the first hurdle. We hold unhesitatingly that HIV-positive status, simpliciter, whether symptomatic or asymptomatic, comprises a physical impairment under the ADA. Regulations issued by the Equal Employment Opportunity Commission (the EEOC) implementing Title III of the ADA explicitly support this conclusion, see 28 C.F.R. § 36.104 (1996) (stating that the phrase "physical impairment" includes HIV); judicial authority buttresses this conclusion, see, e.g., Gates v. Rowland, 39 F.3d 1439, 1446 (9th Cir. 1994); Doe v. Garrett, 903 F.2d 1455, 1459 (11th Cir. 1990), cert. denied, 499 U.S. 904 (1991); and Dr. Bragdon does not seriously advocate an antithetical view.

C. The Major Life Activity.

Moving to the second hurdle, Ms. Abbott cites reproduction as her affected major life activity. The court below accepted this asseveration. See Abbott, 912

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2 The United States asserts that Ms. Abbott also is disabled under the third subset because society commonly regards individuals who are infected with HIV as having substantially limiting impairments. See generally Cook v. State of R.I., Dep't of Mental Health, Retard. & Hosps., 10 F.3d 17 (1st Cir. 1993) (discussing application of the "regarded as" language). We need not reach this contention.

F. Supp. at 587. Dr. Bragdon's rebuttal is twofold. In the first place, he disputes that reproduction properly can be characterized as a major life activity. In the second place, he asserts that even if reproduction so qualifies in general, there is nonetheless an unresolved issue as to whether it qualifies in Ms. Abbott's particular case. We address each of these assertions.

1. Reproduction Writ Large. The question of whether reproduction in large constitutes a major life activity under the ADA is not free from doubt. The ADA itself does not define the term "major life activities," and the few available judicial precedents reveal divergent opinions. Compare Pacourek v. Inland Steel Co., 916 F. Supp. 797, 804 (N.D. Ill. 1996) (finding that reproduction is a major life activity) and Erickson v. Board of Govs. of State Colleges, 911 F. Supp. 316, 323 (N.D. Ill. 1995) (same) and Cain v. Hyatt, 734 F. Supp. 671, 679 (E.D. Pa. 1990) (same) with Krauel v. Iowa Methodist Med. Ctr., 95 F.3d 674, 677 (8th Cir. 1996) (holding that reproduction is not a major life activity) and Zatarain v. WDSU-TV, Inc., 881 F. Supp. 240, 243 (E.D. La. 1995) (same). Still, it is clear that Ms. Abbott's HIV-positive status has a profound impact upon her ability to engage in intimate sexual activity, gestation, giving birth, childrearing, and nurturing familial relations. Our society has long recognized the fundamental importance of each element of this cluster of activities, and our jurisprudence reflects this bias. See, e.g., Stanley v. Illinois, 405 U.S. 645, 651 (1972) (terming the rights to conceive and raise children "essential," "basic civil rights," and rights that are "far more precious . . . than property rights") (citations and internal quotation marks omitted). Viewed against this backdrop, we think it is highly likely that Congress accorded comparable importance to these activities when it authored the ADA.

The statute's text appears to bear out this intuition. Because the term "major life activities" is not defined in the enactment, we are obliged to construe it in accordance with its natural (that is, ordinary) meaning. See Bailey v. United States, 116 S. Ct. 501, 506 (1995); Smith v. United States, 508 U.S. 223, 228 (1993). The Court haslooked to familiar dictionary definitions in similar situations. See, e.g., Bailey, 116 S. Ct. at 506; Smith, 508 U.S. at 229. Following that model here lends support to the classification of reproduction as a major life activity. The plain meaning of the word "major" denotes comparative importance. See, e.g., The American Heritage Dictionary of the English Language 1084 (3d ed. 1992) (listing "greater than others in importance or rank" as the initial definition of "major"); Webster's Ninth New Collegiate Dictionary 718 (1989) (defining "major" as "greater in dignity, rank, importance, or interest"). These definitions strongly suggest that the touchstone for determining an activity's inclusion under the statutory rubric is its significance – and reproduction, which is both the source of all life and one of life's most important activities, easily qualifies under that criterion.

The origins of the ADA's language reinforce this conclusion. Congress lifted the term "major life activities" from the Rehabilitation Act of 1973, which used it in defining an "individual with handicaps." See 29 U.S.C. § 706(8)(B) (1988). In that milieu, the term was accorded "a broad definition, one not limited to so-called `traditional handicaps.'" School Bd. of Nassau County v. Arline, 480 U.S. 273, 280 n.5 (1987). In transplanting this combination of words from the soil of the Rehabilitation Act to that of the ADA, Congress specifically directed retention of the original meaning. See 42 U.S.C. § 12201(a) (1994). Had Congress sought to confine the definition of disability narrowly, it

surely would have written new, more restrictive language instead of borrowing a descriptive phrase notable for its breadth. See Doe v. Kohn Nast & Graf, P.C., 862 F. Supp. 1310, 1320 (E.D. Pa. 1994). It would be wholly inconsistent with this history to hold that Congress did not envision reproduction as a major life activity.

In addition to the language of the ADA and the historical antecedents of that language, we are guided by the regulations, which define "major life activities" to "mean[ ] functions such as caring for oneself, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working." 28 C.F.R. § 36.104 (1996).3 As the regulation itself clearly indicates, this enumeration is not meant to be exclusive, and reproduction – one of the most natural of endeavors – fits comfortably within its sweep. Furthermore, the portion of the regulations which defines physical impairments to include physiological disorders affecting the reproductive system, 28 C.F.R. § 36.104 (1996), militates in favor of the same outcome. From the scope of the latter regulation, we deduce that its drafters considered reproduction to be a major life activity – otherwise, including reproductive disorders among the regulation's roster of physical impairments would not have made much sense. See Pacourek, 916 F. Supp. at 1404-05.

The appellant resists this conclusion. The regulation itself includes no general adage to aid courts in determining what constitutes a major life activity, and he

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3 This phraseology is copied verbatim from 45 C.F.R. § 84.3(j)(2)(ii) (1996), a regulation implementing the Rehabilitation Act of 1973. Because that regulation was drafted with congressional oversight and approval, see Arline, 480 U.S. at 279-80, the definition merits particular deference. See Consolidated Rail Corp. v. Darrone, 465 U.S. 624, 634 (1984).

invites us to adopt a limiting principle which will preclude a finding that reproduction qualifies. In his view, major life activities do not embody lifestyle choices, or, as he puts it, "activities that many people decide never to do." This proposition has a modicum of decisional support. See Krauel v. Iowa Methodist Med. Ctr., 915 F. Supp. 102, 106 n.1 (S.D. Iowa 1995) ("Some people choose not to have children, but all people care for themselves, perform manual tasks, walk, see, hear, speak, breathe, learn, and work, unless a handicap or illness prevents them from doing so."), aff'd, 95 F.3d 674 (8th Cir. 1996). In addition, courts have used other formulations en route to concluding that reproduction is unlike the activities listed in the regulation and, therefore, not a major life activity. See, e.g., Krauel, 95 F.3d at 677 (emphasizing that the plaintiff "has the ability to care for herself, perform manual tasks, walk, see, hear, speak, breathe, learn, and work" and is therefore not disabled); Zatarain, 881 F. Supp. at 243 (distinguishing reproduction from major life activities based on frequency of performance).

We do not find any of these formulations persuasive. In Krauel, the Eighth Circuit did not go beyond the activities explicitly included in the regulation and thus effectively treated the list as exclusive, not illustrative. Since the plain language of the regulation counsels otherwise, we are disinclined to emulate that example. The approaches taken by the Zatarain court and the district court in Krauel are no more attractive; in contradistinction to those courts, we see no reason why an activity must be performed either frequently or universally before it can be classified as a major life activity. There is no evidence that Congress intended either frequency or universality to operate as a restriction on the definition of "major life activities." Indeed, the activities explicitly enumerated in the regulation are not

wholly characterized by frequency and universality; learning – even in a broad sense – is for many adults not a part of daily life, and work is certainly not universal (as the lives of some of the very rich and some of the very poor demonstrate). The view from the other end of the spectrum bolsters this conclusion; neither lack of frequency nor lack of universality diminishes the fundamental importance of conceiving, childbearing, and raising a family.

This leaves us with the bare bones of Dr. Bragdon's thesis: that reproduction cannot be considered a major life activity because it is at bottom a lifestyle choice. That emaciated argument lacks force. To treat reproduction as a lifestyle choice, and no more, is merely an exercise in semantics. Most acts that human beings perform – or refrain from performing – have elements of volition. Speaking is undoubtedly a major life activity, but there are those (say, monks who have taken vows of silence) who choose to eschew it.

Though the question is very close, we think it must be resolved favorably to Ms. Abbott. Reproduction (and the bundle of activities that it encompasses) constitutes a major life activity because of its singular importance to those who engage in it, both in terms of its significance in their lives and in terms of its relation to their day-to-day existence. Mindful of this reality, and honoring what we believe to be Congress' intent, we hold that reproduction is a major life activity within the meaning of the ADA.

2. Reproduction Writ Small. Dr. Bragdon's fallback position is that Ms. Abbott is not disabled within the purview of the ADA unless reproduction is a major life activity for her. He then endeavors to use this position to defeat summary judgment, maintaining that a fact finder, drawing

defendant-friendly inferences from the summary judgment record, would confront a genuine issue as to whether giving birth and raising a child is so important to Ms. Abbott as to constitute one of her major life activities.

The premise on which Dr. Bragdon's argument depends is of uncertain reliability. Though it is true that analysis under the first subset of the ADA's definition of disability – "a physical or mental impairment that substantially limits one or more of the major life activities of [the plaintiff]" – calls for an individualized inquiry into whether the plaintiff is disabled, see 29 C.F.R. Pt. 1630, App. § 1630.2(j) (1996) (noting in the context of the ADA's employment discrimination regulations that "[s]ome impairments may be disabling for particular individuals but not for others"); Katz v. City Metal Co., 87 F.3d 26, 32 (1st Cir. 1996); Ennis v. National Ass'n of Business & Educ. Radio, Inc., 53 F.3d 55, 59 (4th Cir. 1995), the need for this case-by-case analysis of disability does not necessarily require a corresponding case-by-case inquiry into the connection between the plaintiff and the major life activity. By way of example, it might be enough for a court to consider only whether a given impairment substantially limits a particular plaintiff without considering whether the activity is of particular import to her. Be that as it may, the question is not dispositive here (nor will it be in many cases), and the most efficient way to decide this appeal is simply to postpone a definitive answer and assume, favorably to the appellant, that a plaintiff claiming a disability under the ADA must show a nexus between her impairment and the major life activity that she asserts has been substantially limited.

Even accepting arguendo that reproduction is not a major life activity for one with no interest in bearing children, the determination of whether

reproduction is a major life activity in a particular case does not automatically become a jury question. Cf. Medina-Munoz, 896 F.2d at 8 (noting that even "elusive concepts such as motive or intent" sometimes can be decided on summary judgment). Here, drawing all reasonable inferences in the manner most helpful to Dr. Bragdon, a fact finder could reach no conclusion other than that reproduction, if a major life activity at all, constitutes such for Ms. Abbott. We explain briefly.

Ms. Abbott's testimony on this point is uncontradicted:

> I have made the decision after I tested positive [for HIV] not to have children because of the risk of infecting the child and the risk of impairing my own immune system, and also the fact that this baby probably wouldn't have a mother after a while.

Dr. Bragdon offers no substantial rebuttal to Ms. Abbott's assertion that HIV ended her consideration of having a family, but instead asks us to doubt her sincerity. In his most telling sortie, he stresses the fact that, during her deposition, Ms. Abbott replied "no" when asked, "Are you impaired in your ability to carry out any of your life functions by the fact that you are HIV positive?" We do not believe that a party's response to a question about "life functions" – a phrase not used in ordinary parlance to refer to reproduction – can fairly be read as a direct contradiction of her unequivocal statements about her reasons for not bearing children. Dr. Bragdon has offered no other evidence suggesting that, short of her HIV infection, Ms. Abbott would have elected to remain childless. In the absence of specific discrediting evidence, a party cannot derail summary judgment by the primitive expedient of insisting that his

opponent's evidence should be disbelieved. See Grubb v. KMS Patriots, L.P., 88 F.3d 1, 4 (1st Cir. 1996).

To say more at this point would be supererogatory. Because uncontradicted evidence establishes that reproduction is a major life activity for Ms. Abbott, the second element of her case is firmly in place.

D. The Limitation.

We turn now to the final hurdle that blocks Ms. Abbott's path. At this hurdle, the parties joust over whether Ms. Abbott's HIV infection substantially limits her major life activity of reproduction. Under the applicable regulation, a person's major life activity is "substantially limited" if it is "restricted as to the conditions, manner, or duration under which [it] can be performed in comparison to most people." 28 C.F.R. Pt. 36, App. B § 36.104 (1996). Dr. Bragdon concedes that an HIV-positive pregnant woman faces an approximately 25% risk of transmitting the virus to her child without AZT therapy and an 8% risk of viral transmission with such therapy. He strives to persuade us, however, that there is an unresolved issue, sufficient to preclude summary judgment, as to whether HIV substantially limits Ms. Abbott's reproductive activity. In other words, he claims that on the record sub judice, a jury reasonably could find that the stated degree of risk does not substantially limit this infected person's ability to reproduce.

We are unconvinced. No reasonable juror could conclude that an 8% risk of passing an incurable, debilitating, and inevitably fatal disease to one's child is not a substantial restriction on reproductive activity. Cf., e.g., 29 C.F.R. Pt. 1630, App. § 1630.2(j) (1996) (stating in the ADA's employment discrimination regulations that "[o]ther impairments, however, such as HIV infection,

are inherently substantially limiting"). In addition, Ms. Abbott faces the unfortunate reality that even if she gives birth to a healthy child, she probably will not live long enough to complete the task of raising the child to adulthood. We thus hold that HIV-positive status is a physical impairment that substantially limits a fecund woman's major life activity of reproduction. Ms. Abbott therefore is disabled within the purview of the ADA.

We add a final observation. As we noted earlier, our mission in cases of statutory construction is to discern the legislature's intent. The result that we reach here comports with evidence in the legislative archives that Congress deemed HIV infected individuals to be disabled under the ADA. See H.R. Rep. No. 101 485(111), at 28 n.18 (i990), reprinted in 1990 U.S.C.C.A.N. 445, 451 n.18 ("Persons infected with the Human Immunodeficiency Virus are considered to have an impairment that substantially limits a major life activity, and thus are considered disabled under th[e] first test of the definition."). Moreover, the ADA's precursor, the Rehabilitation Act, had been construed by the Department of Justice (DOJ) to protect persons infected with HIV from discrimination; in enacting the ADA, Congress endorsed the DOJ's view, noting that "a person infected with [HIV] is covered under the first prong of the definition of the term 'disability' because of a substantial limitation to procreation and intimate sexual relationships." H.R. Rep. No. 101-485(II), at 52, 1990 U.S.C.C.A.N. 303, 334; see also S. Rep. No. 101-116, at 22 (1989). This legislative history thus independently bolsters our conviction that Ms. Abbott is disabled under the ADA.

IV. THE DIRECT THREAT QUESTION

Under the ADA, a place of public accommodation must extend its services to all disabled

persons without reference to their disabilities, subject to certain carefully circumscribed exceptions. See 42 U.S.C. § 12182(a). By virtue of one such exception, a covered service provider need not deal with an individual who "poses a direct threat to the health or safety of others." 42 U.S.C. § 12182(b)(3). The term "direct threat" is defined by the statute; in this context it contemplates the existence of "a significant risk to the health or safety of others that cannot be eliminated by a modification of policies, practices, or procedures or by the provision of auxiliary aids or services." Id.4

Dr. Bragdon seeks safe harbor under this exception, asserting that requiring him to treat Ms. Abbott would pose a direct threat to his health. His argument envisions that to fill Ms. Abbott's cavity, he would need to inject a local anesthetic into her mouth and drill the decayed tooth. These procedures, he says, create an undue risk of HIV transmission both through needlestick and through the spattering of blood and bloody saliva.

4 It is important to note that Dr. Bragdon does not argue that his offer to treat Ms. Abbott in a hospital setting is a practice modification that would eliminate the claimed threat to his health. He did not endeavor to prove in the court below that hospital treatment was significantly safer than office treatment, and he makes no such argument to us. He argues instead that he had no duty to treat her in his office and that his offer to treat her in a hospital was gratuitous (and, therefore, legally irrelevant). Dr. Bragdon claims the right to deny entirely routine dental treatment to patients with HIV, and his defense must stand or fall on the correctness vel non of that thesis. It is only that claim which we consider here. Thus, this case does not address whether it is illegal under the ADA for dentists to take additional precautions when treating HIV-infected patients.

A court's goal in conducting a direct threat analysis under the ADA is to achieve a responsible balance, protecting service providers and other places of accommodation from enforced exposure to unacceptable health and safety risks while at the same time protecting disabled individuals from discrimination that is rooted in prejudice or baseless fear. See Arline, 480 U.S. at 287. EEOC regulations drawn from the Court's seminal opinion in Arline guide this analysis:

In determining whether an individual poses a direct threat to the health or safety of others, a public accommodation must make an individualized assessment, based on reasonable judgment that relies on current medical knowledge or on the best available objective evidence, to ascertain: the nature, duration, and severity of the risk; the probability that the potential injury will actually occur; and whether reasonable modifications of policies, practices, or procedures will mitigate the risk.

28 C.F.R. § 36.208(c) (1996); see also Arline, 480 U.S. at 287-88 (discussing essentially the same factors).

Of course, any inquiry along these lines depends in one sense on what information permissibly may be weighed in the balance and in another sense on the extent to which particular kinds of evidence should be assigned extra weight (or, perhaps, decretory significance). Thus, before evaluating the medical evidence proffered by the parties, we must determine (1) the relevancy, if any, of subsequent medical knowledge (that is, medical evidence not available in September 1994 when Dr. Bragdon refused to treat Ms. Abbott), and (2) the degree of deference, if any, due the judgments of public health officials.

A. The Evidentiary Time Line.

The first of these excursions need not detain us. The applicable regulations instruct that a judgment

on the presence or absence of a direct threat must be predicated on "current medical knowledge or on the best available objective evidence," 28 C.F.R. § 36.208(c) (1996) (emphasis supplied), and, hence, point unwaveringly toward confining medical evidence to that available at the time a dentist or other health-care professional refuses to treat. This principle – that neither the service provider nor the prospective recipient of the service may prove or disprove the direct threat defense by relying on medical evidence not available when treatment was refused – is sound policy. Under such a regime, the service provider retains the opportunity to prove that he made an appropriate determination of the existence of a direct threat based on the evidence available when he made the decision to withhold his services. This is sound policy because, while health-care providers can be expected to maintain a working knowledge of currently accepted thinking in their fields, they cannot be expected to anticipate either future scientific advances or the emerging wisdom of public health organizations. In short, by holding covered service providers to an objective standard featuring the best evidence available at the time they refuse to render treatment to disabled persons, the ADA holds the delicate balance between sometimes conflicting rights steady and true.

This approach is also scrupulously fair. To punish providers when they satisfy an objective standard based on the best evidence available at the time of their decisions would be to punish them for a lack of clairvoyance. By the same token, to hold providers harmless after they have refused treatment based on nothing more than unfounded trepidation would run at cross-purposes with the central theme of the ADA. Fundamental fairness insists that providers in such circumstances ought not to be entitled to rely on

subsequent understandings to shield them from the condign consequences of discriminatory conduct.5 Cf. McKennon v. Nashville Banner Pub. Co., 115 S.Ct. 879, 885 (1995) (holding that an employer in an employment discrimination case may not justify its conduct based on evidence that did not motivate it at the time of the employment decision); North Shore Univ. Hosp. v. Rosa, 657 N.E.2d 483, 486 (N.Y.1995) (evaluating conduct alleged to be discriminatory under state law based on accepted medical practice at the time of the alleged infraction).

B. The Degree of Deference.

The second threshold determination involves the degree of deference due the medical judgments of public health authorities. The government joins Ms. Abbott in arguing for a rule which, if embraced, would cede great deference to those authorities. They posit that, in the absence of dissent among public health authorities, a service provider should be bound to accept the expressed collective judgment of those authorities unless he can demonstrate that this judgment is medically unreasonable. In contrast, Dr. Bragdon asseverates that, at least in the case of a service provider who is himself a skilled professional (such as a doctor or dentist), a court

5 Few rules are without exception in extreme cases. One can conceive of situations in which, after a medical professional refused treatment but before trial, there might occur some medical breakthrough or stunning new CDC pronouncement that overwhelmingly vindicated the professional's fears. Especially because decisions in ADA cases have some forward-looking impact, we do not rule out the possibility that later occurring events might occasionally be pertinent. But nothing in the present record suggests any post hoc scientific revelation warranting a departure from the usual rule.

should defer to the provider's judgment, as long as it appears to have been reasonable in light of then-current medical knowledge.

The question of deference pivots on language in Arline, where Justice O'Connor, writing for the Court, stated that in making factual findings of the sort that are necessary to inform the inquiry into the existence vel non of a direct threat, "courts normally should defer to the reasonable medical judgments of public health officials." 480 U.S. at 288. In crafting regulations applicable to the ADA, the EEOC treated this passage from Arline as gospel. See 28 C.F.R. Pt. 36, App. B § 36.208 (1996) (remarking that the direct threat regulations "codif[y] the standard first applied by the Supreme Court in [Arline]").

We agree that the deference due public health officials must flow from the quoted passage – but acknowledging the hegemony of Arline does not signal automatic victory for Ms. Abbott and the government. The "defer entirely" formulation that they urge upon us is totally unprecedented; we have found no case in which the views of public health authorities are treated with the solicitude that Ms. Abbott and the government invite. If adopted, this formulation would come close to making a consensus among public health authorities unchallengeable by other medical evidence and, consequently, unreviewable by the courts. Nothing in Arline demands such obsequious obeisance to public health authorities or indicates an intention on the Court's part to consign the medical judgments of private physicians to some evidentiary Siberia. Instead, the Court quite clearly left the details of deference for another day. See, e.g., Arline, 480 U.S. at 288 n.15 ("This case does not present, and we do not address, the question whether courts should also defer to the reasonable

medical judgments of private physicians . . . .").

Because we are unprepared to say that medical wisdom resides exclusively in public health authorities, we reject the idea of a conclusive presumption. The applicable regulations state that "[s]ources for medical knowledge include guidance from public health authorities, such as the U.S. Public Health Service, the Centers for Disease Control, and the National Institutes of Health." 28 C.F.R. Pt. 36, App. B § 36.208 (1996) (emphasis supplied). This list is plainly illustrative, not exhaustive, and the use of the verb "include" indicates to us that other sources of medical knowledge are within the pale. The statute, the suggestion implicit in the regulations, and the teachings of the Court are best synthesized by fashioning a rule which gives prima facie force to the views of public health authorities, but which permits a service provider to challenge those views based on contrary, properly supported opinions voiced by other recognized experts in the field (e.g., research studies published in peer-reviewed journals). Such a rule accords a meaningful degree of respect to the views of public health authorities, particularly when those views are unanimous. But the rule draws a distinction between respect and absolute capitulation. Under it, the conclusions of public health authorities may be rebutted by persuasive evidence adduced from other recognized experts in a given field.6

Treating the presumption of correctness

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6 In United States v. Jessup, 757 F.2d 378, 381-84 (1st Cir. 1985), then-Judge Breyer distinguished "bursting bubble" presumptions (which vanish when contrary evidence is introduced) from "intermediate" presumptions (which remain available for consideration by the fact finder even after contrary evidence is introduced). The presumption here is of the latter stripe.

which attaches to the collective judgment of public health authorities as rebuttable will not, as the government intimates, sabotage the statutory scheme. Because the test for the existence vel non of a direct threat remains an objective one, a service provider cannot successfully contradict an achieved consensus simply by proffering an unsupported opinion. This ensures that, despite the rebuttable nature of the presumption, the direct threat defense may not be used to mask prejudice or unfounded fears. Rather, to frame a genuine issue, an opposing view must be documented by competent countervailing evidence that is directly relevant. Speculative inferences, glancing statistics, unsupported conclusions, and ruminative surmise will not serve.

C. Applying the Standard.

We turn next to a review of the medical evidence that was available when Ms. Abbott visited Dr. Bragdon's office in September 1994. By then, both the United States Centers for Disease Control and Prevention (CDC) and the American Dental Association (the Association) had spoken to the issue of the health risk to dental workers from patients infected with HIV. The Association's 1991 Policy on AIDS, HIV Infection and the Practice of Dentistry stated that:

Current scientific and epidemiologic evidence indicates that there is little risk of transmission of infectious diseases through dental treatment if recommended infection control procedures are routinely followed. Patients with HIV infection may be safely treated in private dental offices when appropriate infection control procedures are employed.

In 1993, the CDC updated its earlier guidelines and specified a compendium of infection control procedures, known as the "universal precautions," for use by dental

workers treating HIV-positive patients. See CDC, Recommended Infection-Control Practices for Dentistry, 1993 (the Recommendations). The CDC took the position that, when implemented, the prescribed precautions "should reduce the risk of disease transmission in the dental environment." Id. at 3. While the guidelines do not state explicitly that no further risk-reduction measures are desirable or that routine dental care for HIV-positive individuals is safe, those two conclusions seem to be implicit in the guidelines' detailed delineation of procedures for office treatment of HIV-positive patients. See United States v. Morvant, 898 F. Supp. 1157, 1166 (E.D. La. 1995) (concluding that "the universal precautions as prescribed by the CDC are universally accepted as `reasonable modifications' of practices that will significantly mitigate the risk [of HIV transmission from patient to dentist]").7 Tellingly, no public health authority has suggested that it is unsafe to provide routine dental care to HIV-positive patients in a private office environment. We find, therefore, that Ms.

7 In support of her motion for brevis disposition, Ms. Abbott also presented testimony from Dr. Donald Wayne Marianos, director of the Division of Oral Health at the CDC. Dr. Marianos stated categorically that "[n]o infection control procedures beyond the use of universal precautions are necessary when providing routine dental care to persons with HIV and AIDS." He also declared that "[t]he CDC does not recommend the use of infection control procedures beyond those cited in [the Recommendations] for the provision of routine dental treatment to persons with HIV or AIDS" and that "the risk of HIV transmission from patient to provider [in such circumstances] is so low as to be unquantifiable." Dr. Marianos' testimony is of limited value to us in assessing the medical evidence available to Dr. Bragdon inasmuch as the record contains no evidence that the CDC had publicly taken so explicit a position as of September 1994.

Abbott adduced competent evidence of reasonable medical judgments by public health officials, not contradicted by other public health authorities, to the effect that affording routine dental care (such as filling cavities) to HIV-infected patients in an office environment does not pose a direct threat to the dentist's health.

The next question is whether Dr. Bragdon has produced sufficient countervailing evidence that filling Ms. Abbott's cavity in an office setting would have constituted a direct threat to his health. In an endeavor to create a genuine issue of material fact, he cites eight sources of information which he argues show that rendering the necessary treatment in his office would have jeopardized his health.8 We examine these sources to determine if any of them, individually or in the aggregate, justify denying summary judgment to Ms. Abbott.

1. Dr. Bragdon notes that the Food and Drug Administration (the FDA) recommended in 1992 that persons who have had contact with a patient's blood through needlestick, non-intact skin, or mucous membranes refrain from donating blood for a year. This recommendation is clearly insufficient to demonstrate a direct threat to Dr. Bragdon. To safeguard the integrity of the blood supply, the FDA may seek to avoid minute

8 Although Dr. Bragdon presented material from a retained expert, Dr. Sanford Kuvin, he does not claim that Dr. Kuvin's testimony was based on medical knowledge available to him on the date he declined to treat Ms. Abbott, and his brief discusses Dr. Kuvin's testimony in a separate section devoted to the possibility that evidence available after September of 1994 might be relevant to the issue. To clinch the point, Dr. Kuvin's testimony itself relies on a number of sources not available until 1995 and beyond.

risks and take unusual precautions even in the absence of actual evidence of danger. It is not surprising, therefore, that the FDA issued its recommendation without making any finding that there was a significant risk of contracting HIV from contact of the type and kind described. In contrast, to determine whether there is a direct threat within the purview of the ADA, an inquiring court must gauge the nature, duration, and severity of the risk.9 The FDA's recommendation does not advance this inquiry.

2. Dr. Bragdon refers to a CDC report documenting forty-two incidents of transmission of HIV to health-care workers and seven possible transmissions to dental workers. We deem this data insufficient to warrant depriving Ms. Abbott of summary judgment. Evidence of HIV transmission to health-care workers outside the dental field does not prove a direct threat to a practicing dentist in the absence of any evidence showing that the magnitude of risk to a dentist is comparable to the risk to other health-care workers in other settings. Nor is such an equivalency obvious; health-care workers in, say, emergency rooms may be exposed to much larger needles and more copious quantities of blood than are common in routine dental practice.

Generalities about health-care workers aside, Dr. Bragdon does not cite a single confirmed instance of HIV transmission to a dentist. He does, of course, point to seven instances of "possible

9 Then, too, the stakes are different. The only foreseeable loss from what may be an overabundance of caution on the FDA's part is some small quantity of donated blood. Surrendering to stereotypes and unfounded fears when dealing with disabled persons, however, will subvert Congress' intent in enacting the ADA.

transmissions" of HIV to dental workers, but mere possibilities are too speculative to satisfy a litigant's burden of production at the summary judgment stage. See Smith, 76 F.3d at 428 (noting that unsupported speculation must be disregarded at summary judgment); Medina-Munoz, 896 F.2d at 8 (similar).

3. Dr. Bragdon brandishes a CDC report telling of the transmission of HIV from a Florida dentist to his patients. But neither the CDC report nor any other proffered evidence establishes transmission of HIV from a patient to a dental worker. The difference is meaningful. Dentists have the advantage of equipping and staffing their offices and dictating the precautionary procedures that will be utilized during patient encounters. In contrast, patients have no way of assuring that any particular risk-reduction measures, much less the universal precautions recommended by the CDC, are introduced. Given that dentists are in a superior position to patients in terms of protecting against infection, a single report of dentist-to-patient infection cannot reasonably be taken to suggest a direct threat to dentists from their patients' infections.

4. The high-speed drills that dentists use when filling cavities may also generate aerosol mists of water, blood, and bloody saliva. Using this datum as a springboard, Dr. Bragdon jumps to the conclusion that a study by researchers at the Stanford Medical School, raising concerns about transmission of HIV when dentists perform aerosol generating procedures, is sufficient to defeat summary judgment. See Gregory K. Johnson and William S. Robinson, Human Immunodeficiency Virus-1 (HIV-1) in the Vapors of Surgical Power Instruments, 33 Journal of Medical Virology 47 (1991). By its own characterization, however, the Johnson-Robinson paper is too conjectural to raise a genuine issue of material fact

as to whether filling Ms. Abbott's cavity would constitute a direct threat to Dr. Bragdon's health. The paper notes that it "do[es] not quantitate the risk of HIV transmission . . . by such aerosols," and that "the large body of epidemiologic data on prevalence of HIV infections . . . would suggest that transmission by aerosols is not common." Id. at 49.

5. Dr. Bragdon points out that the CDC did not state that it was medically unwise to take additional precautions with persons known to be HIV-positive. This observation, while true, gains him little ground. Such silence on the part of the CDC is at best equivocal; it does nothing to prove that there is any risk to a dentist in treating HIV-positive patients. Because the inference that Dr. Bragdon seeks to draw from the CDC's silence is wholly conjectural, it cannot figure in the summary judgment calculus.[10] See Smith, 76 F.3d at 428.

6. Dr. Bragdon adverts to the Association's report that the risk to health-care workers is greater than the risk to patients. At the same time, he notes, federal courts have found a significant risk of HIV transmission from health-care workers to patients. See, e.g., Bradley v. University of Tex. M.D. Anderson Cancer Ctr., 3 F.3d 922, 924 (5th Cir. 1993) (per curiam), cert. denied, 510 U.S. 1119 (1994); Doe v. Washington Univ., 780 F. Supp. 628, 633 (E.D. Mo. 1991). Dr. Bragdon seeks to lace these findings together to support a conclusion that the risk to him from treating Ms. Abbott is also significant. The tie does not bind; this combination produces far too much of a generalization to have any force in the much narrower contours of this case.

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10 In all events, it is implicit in the 1993 CDC guidelines that no risk-reduction steps beyond the universal precautions are necessary to ensure the safety of dentists providing routine dental care to HIV-positive individuals. See supra p. 24.

Moreover, the federal cases involving transmission of HIV from health-care workers to patients are inapposite not only because of the asymmetry of control of risk-reduction measures between health-care workers and patients, see supra, but also because the cited cases spring from a context in which any risk at all to patients is deemed unacceptable. See Washington Univ., 780 F. Supp. at 633 ("It is the stated goal of the medical profession to heal, and its secondary axiom, if healing is not possible, is not to harm.") Therefore, these cases do not support a reasoned inference that rendering routine care to a dental patient infected with HIV constitutes a direct threat to the dentist's health.

7. Dr. Bragdon states that although he did his best to comply with the universal precautions, he still sustained sharp injuries on a regular basis. We believe that this kind of anecdotal evidence by a dentist who is not an expert on infectious disease is inadequate to block summary judgment. See Medina-Munoz, 896 F.2d at 8 (noting that summary judgment may be granted when opposing evidence is not significantly probative). Although courts need not defer slavishly to the judgments of public health officials, see supra Part IV(B), we believe it would be inconsistent with Arline were courts to credit lay testimony on matters of public health. See Arline, 480 U.S. at 287-88 (emphasizing the need to protect the handicapped from unfounded fears).

8. Dr. Bragdon cites a study reporting that compliance with the universal precautions would reduce needlestick exposures by only 62%. See Edward S. Wong et al., Are Universal Precautions Effective in Reducing the Number of Occupational Exposures Among Health Care Workers?, 265 Journal of the American Medical Association 1123, 1126 (1991). This statistic says nothing about the initial baseline degree of danger of treatment in

the absence of the universal precautions and thus is impuissant to prove that a dentist using the CDC's precautions is directly threatened by treating an HIV-positive patient.

At this point, we have reviewed all the proof relevant to direct threat that Dr. Bragdon claims was available to him in September of 1994. Each piece of evidence is too speculative or too tangential (or, in some instances, both) to create a genuine issue of material fact. This ends our item-by-item explication of the record.

We next consider whether these eight proffers, in cumulation, possess greater probative force. This can occur when items of evidence, each insufficient in itself to prove a particular point, complement each other, like interlocking pieces of a jigsaw puzzle, in such a way that they together demonstrate some material fact. Thus, had Dr. Bragdon cited separate sources of evidence demonstrating (a) the likelihood of dental needlestick and (b) the likelihood of a dentist contracting HIV from a needlestick, these items together possibly would have been adequate to defeat summary judgment on the direct threat defense. Or, had he proffered several items of evidence that each showed a small risk to the health or safety of others, the aggregate effect of these items might have sufficed to prove a significant risk and thus to thwart summary judgment.

Despite the fact that Dr. Bragdon did not explicitly make a "cumulative proof" argument, we have spontaneously reviewed the record with this thought in mind. Having done so, we are satisfied that the evidentiary proffers canvassed above, insufficient in themselves, are likewise insufficient in combination to call into legitimate question the lower court's entry of summary judgment. In making this evaluation, we emphasize that, under the ADA, a service provider like

Dr. Bragdon is not entitled to demand absolute safety; he can rely upon the direct threat defense only in response to significant risks. Here, Dr. Bragdon has failed to present meaningfully probative evidence that treating Ms. Abbott would have posed a medically significant risk to his health or safety.

V. CONCLUSION

For the reasons indicated, we rule that Ms. Abbott's HIV-positive status is a physical impairment which substantially interferes with her major life activity of reproduction, and that she is therefore disabled within the meaning of the ADA. Inasmuch as Dr. Bragdon has failed to produce sufficient evidence to establish a triable issue on his direct threat defense, the entry of summary judgment in Ms. Abbott's favor must stand.

Under ordinary circumstances, we would go no further. Here, however, we believe that more should be said. It is sometimes convenient to think of cases as involving conduct that may be categorized in terms of polar extremes: reasonable or unreasonable, praiseworthy or blameworthy, good or evil. But, given the complexities of the society in which we live, many decisions resist such facile classification into black-or-white dichotomies. Such cases are better characterized in varying shades of gray.

This is such an instance. The litigants' positions are understandable in human terms and impartial observers can empathize with both parties. Still, on the facts of record, the defendant's refusal to render routine dental care to an HIV-positive patient offends a duly enacted federal statute and thus cannot be tolerated by a court of law.

Although we do what we must, we are not blind to the difficulty of the choices that the ADA compels health-care professionals such as Dr. Bragdon to make.

We also recognize that cases of this kind are necessarily fact-sensitive; had the patient required more invasive treatment or had the dentist proffered stronger evidence of a direct threat, the result may well have differed. In the same vein, presented with other facts and circumstances in a future case, perhaps reflecting dramatic improvements in medical science that substantially reduce the likelihood of transmitting HIV through reproduction, we might well reach a different conclusion than the one that we reach today. Such an ebb and flow is to be expected, because this is the very nature of the inquiry that the ADA mandates. We therefore caution future courts not to read our words more broadly than the context admits; our decision today eschews a blanket rule and instead demands case-by-case inquiry into a service provider's responsibilities to treat HIV-positive patients.

Affirmed.

ORDER AND MEMORANDUM OF DECISION

BRODY, District Judge.

Plaintiff Sidney Abbott, an individual with Human Immunodeficiency Virus ("HIV") filed this action against Defendant Randon Bragdon, a dentist with a practice in Bangor, Maine. Plaintiff's Amended Complaint alleges violations of title III of the Americans with Disabilities Act ("ADA" or "title III") and the Maine Human Rights Act ("MHRA") based on Defendant's refusal of treatment in his office. Defendant offered alternative treatment to Plaintiff in a hospital setting. Plaintiff seeks injunctive and declaratory relief under the ADA and MHRA, and civil penal damages under the MHRA. Both the United States ("Government") and the Maine Human Rights Commission ("MHRC") have intervened as Plaintiffs, and all Parties have moved for Summary Judgment. For the following reasons, the Court grants Summary Judgment for Plaintiff, and denies Summary Judgment for Defendant.

Background

The undisputed facts are as follows. Plaintiff Sidney Abbott has been infected with HIV for the past nine years. HIV is a retrovirus which causes Acquired Immune Deficiency Syndrome ("AIDS"). People exposed to HIV may contract the virus, and if so, will develop HIV antibodies and become HIV positive. HIV positive status does not equate with manifest illness. Individuals may carry HIV for several years without manifesting the collection of symptoms known as AIDS. During that period, the HIV carrier remains asymptomatic, meaning apparently healthy and generally able to participate in

day to day life. Even in the asymptomatic phase, however, the HIV carrier's blood remains infected with a multiplying virus that creates abnormalities in that person's blood and lymphatic systems. To date, Plaintiff remains asymptomatic.

Defendant, Randon Bragdon, a dentist licensed to practice in the state of Maine, has operated a dental practice in Bangor since 1978. In September of 1994, Plaintiff arrived at Defendant's office for apre-scheduled dental appointment. On her Patient Registration and Health Record form, Plaintiff indicated that she had HIV. Defendant examined Plaintiff and diagnosed a cavity. Defendant informed Plaintiff that pursuant to his infectious disease policy, he would not fill her cavity in his office, but would be glad to treat her in a hospital setting. Defendant then told Plaintiff that he would charge her the standard fee for filling a cavity as well as what the hospital charged for use of its facilities.

With respect to the ADA, the Parties dispute (1) whether Plaintiff's asymptomatic HIV constitutes a disability under the statute, and *(2)* whether treatment of Plaintiff in Defendant's office poses a direct threat to the health and safety of others such that Defendant may lawfully refuse such treatment. With respect to the MHRA, the Parties dispute whether Defendant's office constitutes a place of public accommodation. Finally, Defendant challenges the ADA on various constitutional grounds.

Discussion

A. Summary Judgment

Courts properly grant summary judgment when the moving. party demonstrates the absence of a genuine issue of material fact, and that it is entitled to judgment as a matter of law. Fed.R.Civ.P. 56(c). The moving party may rely on deposition testimony, answers to interrogatories, admissions on file and affidavits to meet its burden. Id. In addition the moving party may satisfy its burden by demonstrating an absence of evidence to support an essential element of a claim for which the nonmoving party bears the burden of proof. *Celotex Corp. v. Catrett,* 477 U.S. 317, 325, 106 S.Ct. 2548, 2554, 91 L.Ed.2d 265 (1986). To defeat summary judgment, the nonmoving party need only present evidence from which a jury might return a verdict in its favor. *Anderson v. Liberty Lobby,* 477 U.S. 242, 257, 106 S.Ct. 2505, 2514, 91 L.Ed.2d 202 (1986). The nonmoving party, however, may not rest on mere allegations or denials, but must employaffidavits, admissions, deposition testimony and answers to interrogatories to set forth specific facts establishing a genuine issue for trial. Fed.R.Civ.P. 56(e).

B. ADA

Under title III, a place of public accommodation may not discriminate ate against an individual on the basis of a disability in the full and equal enjoyment of services. 42 U.S.C. § 12182(a). Places of public accommodation, however, may deny full and equal enjoyment of services to an individual who poses a direct threat to the health or safety of others. 42 U.S.C. § 12182(b)(3). To find a violation of title III, therefore, the

Court must determine that (1) Defendant's office constitutes a place of public accommodation, (2) Plaintiff has a disability for purposes of the ADA, and (3) treatment of Plaintiff in Defendant's office does not pose a direct threat to the health or safety of others. Defendant does not dispute that his office constitutes a place of public accommodation under the ADA.[1] The Court also concludes that Plaintiff is disabled as a matter of law, and that treatment of Plaintiff in Defendant's office poses no direct threat to the health and safety of others.

1.Plaintiff is Disabled as a Matter of Law

Title III of the ADA prohibits a place of public accommodation from discriminating in equal use of services on the basis of disability. Under the ADA, disability means "(A) a physical or mental impairment that substantially limits one or more of the major life activities of such individual; (B) a record of such impairment; or (C) being regarded as having such an impairment." 42 U.S.C. § 12102(2). Defendant contends that asymptomatic HIV does not constitute a *per se*

[1] **Based on the statute and interpretive guidelines, Defendant's office constitutes a place of public accommodation. The Department of Justice interpretive guidelines for the ADA define a place of public accommodation as including the professional office of a health care provider whose operations affect interstate commerce. 28 C.F.R. § 36.104. While not binding, such regulations carry significant persuasive weight. See *Chamberlin v. 101 Realty, Inc., 915* F.2d 777, 781 (1st Cir.1990).**

disability, and that Plaintiff has failed to offer evidence upon which to conclude that her asymptomatic HIV substantially limits any major life activity.

The ADA classifies neither HIV, nor any other disease or condition, as a *per se* disability.[2] Instead, application of the statute to a given individual depends on whether that individual has a physical or mental impairment, and whether that impairment substantially limits a major life activity of that individual. 42 U.S.C. § 12102(A). The Court is persuaded that asymptomatic HIV constitutes a physical impairment for the purposes of the ADA. The interpretive guidelinesspecifically include HIV, whether symptomatic or asymptomatic, among the types of diseases that constitute disabilities. 28 C.F.R. § 36.104. The vast weight of the authority also supports the

2 The Court departs from the analysis employed by the two district courts that have considered the factual issue presented in this case. See *D.B.* v. *Bloom,* 896 F.Supp. 166, 170 (D.N.J.1995): *United States of America v. Morvant,* 898 F.Supp. 1157. 1161 (E.D.La.1995). In both of those cases, the courts assumed that since the interpre2.

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proposition that HIV constitutes a physical impairment for the purposes of the ADA.[3] *See Gates v. Rowland,* 39 F.3d 1439, 1446 (9th Cir.1994); *Doe v. Garrett,* 903 F.2d 1455, 1459 (11th Cir.1990), *cert. denied,* 499 U.S. 904, 111 S.Ct. 1102.113 L.Ed.2d 213 (1991); *EEOC v. Chemtech International Corp.,* 1995 WL 608355 at *1 (S.D.Tex.1995); *Austin v. Pennsylvania Department* of *Corrections,* 876 F.Supp. 1437,1465 (E.D.Pa.1995); *Robinson* v. *Henry* Ford *Health Systems, 892* F.Supp. 176, 180 (E.D.Mich.1994); *Howe v. Hull,* 873 F.Supp. 72, 78 (N.D.Ohio 1994); *Doe v. Kohn Nast & Graf, P.C.,* 862 F.Supp. 1310, 1318-20 (E.D.Pa.1994); *T.E.P.* v. *Leavitt, 840* F.Supp. 110, 111 (D.Utah 1993); *Doe v. District of Columbia,* 796 F.Supp. 559, 568 (D.D.C. 1992); *Glanz v. Vernick,* 756 F.Supp. 632, *635* (D.Mass.1991).

Less clear is whether Plaintiff's asymptomatic HIV substantially limits one or more of her major life activities. See 42 U.S.C. § 12102(2)(A). The Court concludes that it does. Plaintiff identifies reproduction as the sole major life activity that her asymptomatic HIV substantially limits. She asserts that the risk of transmitting HIV to a potential child, as well as possible harm to her own immune system has deterred her from having children.[4] The Court, therefore, must inquire (1)

3 The interpretive guidelines state that the ADA shall not be construed to apply a lesser standard than the standards applied under title V of the Rehabilitation Act of 1973. 28 C.F.R. § 36.103. Thus, cases construing similar language in the Rehabilitation Act impact interpretation of the ADA.

4 Intervenor Plaintiff MHRC further asserts

whether reproduction constitutes a major life activity,and, if so, (2)whether Plaintiff's HIV substantially limits hat major life activity. 42 U.S.C. § 12102(2)(A). An examination of both of these inquiries leads the Court to conclude that Plaintiff's asymptomatic HIV substantially limits her major life activity of reproduction.

As a matter of common sense, the outcome of the first inquiry seems obvious. Reproduction, one of the most fundamental of human activities, must constitute a major life activity. From the perspective of the ADA, however, that issue becomes somewhat murky. The interpretive guidelines define "major life activities" as "functions such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working." 23 C.F.R. § 36.104. At least one court has determined that reproduction does

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that asymptomatic HIV substantially limits other major life activities such as the victim's sex life. A close reading of the statutory language, however. reveals the need for an individual determination of substantial limitation. See 42 U.S.C. § 12102(2)(A) (disability requires substantial limitation of major life activity of "such individual"). Accordingly, while the MHRC may be generally correct that asymptomatic HIV can substantially limit a victim's sex life. Plaintiff has offered no evidence on that issue, leaving the Court unable to analyze it in a Summary Judgment context.

not constitute a major life activity for the purposes of the ADA, reasoning that one does not engage in reproduction with the same frequency as walking, seeing, speaking, breathing, learning and working. *Zatarain v. WDSU Television, Inc.,* 881 F.Supp. 240, 243 (E.D.La. 1995).

The Court, however, concurs with the majority of courts who have concluded that reproduction does constitute a major life activity. *See Erickson v. Northeastern Illinois University,* 911 F.Supp. 316 at 321, (N.D.Ill. 1995); *Pacourek v. Inland Steel Co.,* 858 F.Supp. 1393. 1404-05 (N.D.Ill.1994); *Kahn Nast* & Graf, *P.C.,* 862 F.Supp. at 1320-21; *District of Columbia, 796* F.Supp. at 568; Cain v. *Hyatt, 734* F.Supp. 671, 679 (E.D.Pa. 1990). Rather than limit major life activities, the interpretive guidelines define major life activities as functions such *as* caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working. 28 C.F.R. § 36.104 (emphasis added). Use of the words "such as" indicatesan illustrative, not exclusive, list of major life activities. *Kahn, Nast & Graf,* 862 F.Supp. at 1320. Moreover, as the Eastern District of Pennsylvania points out, Congress chose to use the broad term "major life activities" rather than a more limited term, such as "major work activities." *Id.* In other settings, the interests in conceiving and raising one's own children have been recognized as essential and basic civil liberties. *Cain,* 734 F.Supp. at 679 (citing *Stanley* v. *Illinois,* 405 U.S. 645, 651, 92 S.Ct. 1208, 1212, 31 L.Ed.2d 551 (1972).

Reducing reproduction to the specific act of conception ignores the processes that occur continually in both male and female reproductive systems in order to achieve conception. *Erickson,* 911 F.Supp. at 321. Limitation of reproduction to conception also ignores the

process of raising and caring for offspring upon which successful reproduction depends. The reasoning of courts that have already considered the issue, as well as the broad language of both the statute and the interpretive guidelines persuade this Court that reproduction constitutes a major life activity for the purposes of the ADA.

Finally, based on the undisputed evidence, the Court concludes that Plaintiff's asymptomatic HIV substantially limits her major life activity of reproduction.[5] The Parties have not presented evidence that Plaintiff's asymptomatic HIV posēs a direct barrier to Plaintiff's ability to reproduce, in the sense, for example, that it has rendered her infertile. The statutory language, however, does not require such a stringent inquiry. By requiring an individual's physical or mental impairment to substantially limit a major life activity, the statute does not contemplate a complete inability of thatindividual to engage in a particular major life activity. See 42 U.S.C. § 12102(2)(A) (emphasis added).

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5 In order to constitute a disability, an individual must have a physical or mental impairment that substantially limits a major life activity *"of such individual."* 42 U.S.C. § 12101(2)(A) (emphasis added). Thus. the Court's inquiry is not whether such impairment substantially limits the major life activity of reproduction generally. but whether in this case, Plaintiff's asymptomatic HIV substantially limits her major life activity of reproduction. *See id.*

Child birth poses a risk of physical harm to an asymptomatic HIV mother. *See Thomas v. Atascadero Unified School District,* 662 F.Supp. 376, 379 (C.D.Cal.1986) (childbirth dangerous to asymptomatic HIV patient and others). In her deposition Plaintiff testified that fear of harm to her immune system contributed to her decision not to have children once she tested positive for HIV (PL's Dep. at 79.) In addition, an HIV positive mother runs the risk of infecting her child, during pregnancy, through child birth or, if she chooses to do so, through breast feeding. In her deposition, Plaintiff also indicated that fear of infecting her child contributed to her decision not to have children. (PL's Dep. at 79.) Finally. as previously indicated, reproduction extends beyond the act of conception and the period of gestation, to the process of caring for and raising a child. In her deposition, Plaintiff cited fear that her child would lose its mother as another reason for not having children. (Pl.'s Dep. at 79.) Defendant does not dispute any of Plaintiff's asserted reasons for not having children, and those reasons all stem from her HIV positive status. The Court concludes that Plaintiff has established that her asymptomatic HIV has substantially limited her major life activity of reproduction.[6]

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6 Defendant offers statistics demonstrating a 25% risk of transmission of HIV from mother to child and argues that such a low risk cannot possibly translate into a disability under the ADA.

Defendant. however, misconstrues the inquiry. The Court has determined that the HIV virus constitutes a physical impairment under the ADA. The Court has also concluded that reproduction constitutes a major life activity.

The Court concludes that Plaintiff is disabled as a matter of law under the ADA.

2.Treatment of Plaintiff in Defendant's Dental Office Poses no Significant Risk to the Health and Safety of others

The ADA does not require a covered entity to extend its public accommodations to any individual who poses a direct threat to the health or safety of others. 42 U.S.C. § 12182(b)(3). Direct threat means "a significant risk to the health or safety of others that cannot be eliminated by a modification of policies, practices or procedures, or by the provision of auxiliary aids or services." *Id.* The interpretive guidelines further define direct threat as a significant risk to the health or safety of others that cannot be eliminated by a modification of policies, practices or procedures. 28 C.F.R. § 36.208(b). In determining whether an individual poses a direct threat, the guidelines contemplate that "a public accommodation must make an individualized assessment, based on reasonable medical judgment that relies on current medical knowledge ... to ascertain: the nature, duration. and severity of the risk; the probability that the potential injury will actually occur: and whether reasonable modifications of policies. practices. or procedures will mitigate the risk." 28 C.F.R. § 36.208(c); *see also School*

Thus, the Court's inquiry is not whether a low risk of transmission from mother to child constitutes a disability under the ADA, but whether asymptomatic HIV in this case substantially limits Plaintiff's major life activity of reproduction.

Board of Nassau County v. *Arline,* 430 U.S. 273. 287-88. 107 S.Ct. 1123, 1131, 94 L.Ed 2d 307 (1987) (employing similar factors in Rehabilitation Act, employment discrimination context).

Defendant asserts that performance in his office of invasive dental procedures, such as filling a cavity, on HIV patients poses a significant risk to the health and safety of others that cannot be eliminated. Plaintiff contends that implementation of Centers for Disease Control (CDC) recommended precautionary measures eliminates any significant risk in-office treatment may pose, and, therefore, that Defendant's infectious disease policy as applied to her and similarly situated HIV patients constitutes discrimination on the basis of a disability for purposes of the ADA.[7]

a. Weight of the Evidence

Pursuant to Rule 56, litigants may not base their Motions or opposition to Motions for Summary Judgment

[7] The CDC has issued guidelines to reduce the risk of transmission of infectious diseases in a report entitled Recommended Infection-Control Practices for Dentistry, published in 1993. The CDC provides recommendations concerning every aspect of dental practice, including vaccinations for dental workers, protective attire and barrier techniques. hand care. use of sharp instruments and needles, sterilization of instruments, disinfection of the dental unit and environmental surfaces, use and care of hand pieces and other dental devices, single use disposable instruments, etc.

on mere allegations or denials of the adverse party's pleading. Fed. R.Civ.P. 56(e). Instead, Summary Judgment requires affidavits, depositions or answers to interrogatories that set forth specific facts as would be admissible in evidence. Id. In the context of the direct threat inquiry, the interpretive guidelines provide specific guidance to courts analyzing the risk to a public accommodation under title III. C.F.R. § 36.208(c). The interpretive guidelines codify, for ADA purposes, the analysis employed by the Supreme Court in a Rehabilitation Act context. *See Arline,* 480 U.S. at 288, 107 S.Ct. at 1131. The Supreme Court, in *School Board of Nassau County v. Arline,* emphasized that courts engaging in such an analysis "normally should defer to the reasonable medical judgments of public health officials." *Id.*

The Parties' arguments focus on how HIV can be transmitted and the probability of transmission in the dental health context, two of the four analytical prongs established by the interpretive guidelines. *See* 28 C.F.R. 36.208(c). Defendant asserts that performing invasive dental procedures on Plaintiff creates a significant risk of transmission of HIV through contact with Plaintiff's blood.

Defendant points out that filling a cavity involves injecting the mouth with anesthetic and drilling the decayed tooth. Use of a needle creates a risk of transmission through percutaneous needle stick injury, while drilling creates a risk of transmission through spattering and misting blood and bloody saliva. While Defendant asserts that both of these results create an obvious risk of transmission of HIV, Defendant fails

tooffer the Court Summary Judgment quality evidence to support that assertion.[8] Fed.R.Civ.P. 56. Instead, Defendant argues that quantification of the risk may be impossible, since documentation of the transmission of HIV from infected patient to dentist in many cases may not occur, and, therefore, such transmission may be occurring with alarming frequency. Again, Defendant fails to offer evidence to support that assertion.

Defendant buttresses his argument with tangential statistics. Defendant points out that three to four percent of the individuals who carry HIV have not identified any of the risk factors for becoming infected. By contrast, Defendant asserts, six percent of all health care workers who have contracted HIV exhibit no risk factors. Finally, Defendant points out that in 42 documented cases, health care workers have suffered occupational transmission of HIV Defendant concludes that although no documented case of a dentist suffering occupational transmission has occurred, that will likely change. In lieu of the reasonable medical judgment of a public health official. Defendant

[8] Although the Supreme Court directs district courts to defer to the reasonable judgment of public health officials. *Arline* faded to reach the issue of whether courts should also defer to the reasonable medical judgments of private physicians on which an employer has relied. 480 U.S. at 288 n. 18.107 S.Ct. at 1131 n. 18. Defendant relied on the expert testimony of Sanford Kuvin, M.D. With respect to transmission through aerosol mist. Dr. Kuvin testified that although no one knows whether such transmission is possible, no evidence currently supports aerosol spray as a mode of transmission of HIV.

essentially asks the Court to infer a significant risk from a combination of his conjecture as to potential transmission and statistics which at best may place health care workers at a higher risk of contracting HIV.[9] The Court cannot grant Summary Judgment on the basis of allegation or speculation. *See* Fed.R.Civ.P. 56. Instead, the Court must evaluate the risk based on the current state of medical knowledge, and defer to the reasonable medical judgments of public health officials. 28 C.F.R. 36.208; *Arline,* 480 U.S. at 288, 107 S.Ct. at 1131. Defendant has failed to meet his Summary Judgment burden.

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9 Defendant asserts that the Federal Drug Administration ("FDA") believes the risk of occupational transmission to dentists is significant, based on the FDA's recommendation that any person who has been exposed to the blood of a patient in the previous year should not be permitted to donate blood. The FDA recommendations pertain to prevention of HIV transmission by blood and other blood products. Nowhere does the FDA express a concern regarding the occupational risk of transmission to dentists. The FDA simply lists among several other criteria for donor unsuitability "persons who have had contact with blood and body fluids through percutaneous inoculation (such as injury or accidental needlestick) (Def.'s Mem.Opp n.Summ. J., Ex. 4a at 4-5.) Based on that statement alone. the Court is not willing to infer that the FDA has determined that dentists suffer a significant risk of occupational transmission.

Plaintiff, by contrast, offers the reasonable medical judgment of a public health official, CDC, to refute Defendant's allegations that treatment of her in his office poses a direct threat. Specifically, Plaintiff presented testimony from Wayne Marianos, D.D.S., M.P.H., who serves as Captain in the United States Public Health Service at the Centers for Disease Control ("CDC"), and who currently serves as the Director of the Division of Oral Health. Dr. Marianos participated in the development of the CDC recommended precautions for dentists to prevent the transmission of infectious diseases. He testified both as to the risk of transmission of HIV in a dental setting, as well as to the CDC recommended practices designed to minimize that risk. Dr. Marianos testified that when implemented, the CDC recommendations reduce the already low risk of disease transmission in the dental environment, from either patient to dental health care worker, dental health care worker to patient, or patient to patient. Dr. Marianos further testified that routine dental treatment to persons with HIV or AIDS requires no additional procedures beyond the CDC recommendations.[10] In other words,

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10 Plaintiff also offers the opinion of the American Dental Association, which concurs with Dr. Marianos that routine adherence to the recommended procedures results in little risk of transmission, and stresses that a dentist should not refuse to treat a patient whose condition is within the dentist's current realm of competence solely because the patient carries HIV.

Plaintiff has provided evidence, of Summary Judgment quality, of a reasonable medical judgment of a public health official, based on current medical knowledge, that treating HIV positive patients such as Plaintiff in a dental office does not pose a direct threat to the health and safety of others.[11]

b. *Weight of the Authority*

Both Parties assert that the weight of judicial authority supports their position. Defendant points to a line of case law in which courts have held that the suspension or termination of HIV infected health care workers does not constitute discrimination under title III. *See Doe* v. University *of Maryland Medical System Corporation,* 50 F.3d 1261, 1267 (4th Cir.1995); *Bradley v. University of Texas M.D. Anderson Cancer Center. 3* F.3d 922.925 (5th Cir.1993), *cert. denied.* - U.S. - 114 S.Ct. 1071, 127 *L.Ed.2d 389 (1994): Leckelt v. Board of Commissioners of Hospital District No.1.* 909 F.2d 820, 830 (5th Cir.1990); *Mauro v. Borgess Medical Center,* 886 F.Supp. 1349, 1354

11 With respect to the other two analytical prongs, the duration and severity of the risk, the evidence demonstrates that the risk is lifelong, in that no cure for HIV exists, and, severe, in that the potential harm to third parties, here Defendant, is illness and death. *See Arline,* 4S0 U.S. at 288 107 S.Ct. at 1131 (explaining test). In this case, however, neither the duration nor severity outweigh the evidence as to how the disease is transmitted and the slight probability of transmission. See *Morvant.* 898 F.Supp. at 1166.

(W.D.Mich.1995); *Scoles v. Mercy Health Corporation,* 887 F.Supp. 765, 772 (E.D.Pa.1994); *Doe v. Washington University,* 780 F.Supp. 628, *634-35* (E.D.Mo.1991). Defendant argues that the health care worker cases further support his assertion that Plaintiff poses a direct threat to the health and safety of others. The Court concludes, however, that the key distinction in those cases-HIV infected health care workers as opposed to patients--renders them inapposite to this case.

The HIV health care worker cases that mention the judgment of a public health authority rely on CDC recommendations for minimizing transmission of infectious diseases from health care workers topatients, rather than from patients to dentists. *See University of Maryland,* 50 F.3d at 1263; *Bradley,* 3 F.3d at 924; *Leckelt,* 909 F.2d at 828 and n. 17; *Washington University,* 780 F.Supp. at 633. In *Doe v. University of Maryland System Corporation,* for example, the CDC recommendations indicated that hospitals could bar HIV infected health care workers from performing those procedures the hospital had identified as exposure prone. 50 F.3d at 1263, 1266*; see also Bradley, 3* F.3d at 924 (same CDC recommendations); *Leckelt,* 909 F.2d at 828 (prior version of same guidelines). As indicated, deference to the relevant CDC guidelines in this case, combined with the testimony of one of the authors of those guidelines, logically compels this Court to a different conclusion.

A closer examination of some of the health care worker cases reveals that HIV infected health care workers posed a direct threat in part because of the nature of the relationship between health care provider and patient. *See University* Of *Maryland,* 50 F.3d at 1266; *Mauro, 886* F.Supp. at 1353; *Washington University,* 780

F.Supp. at 633-34. The court in *Doe v. Washington University,* for example, viewed the risk of transmission from a dental student to patient in the context of the stated goal of the medical profession "to heal, and ... if healing is not possible, . . . not to harm." 780 F.Supp. at 633. According to that court, to permit even an occasional death to occur because of a failure to scrupulously guard the safety of patients would appear to be morally unacceptable. 780 F.Supp. at 633-34; *see also University of Maryland,* 50 F.3d at 1266 (defendant made a considered decision to err on side of caution and acted solely with patients' best interests in mind); *Mauro,* 886 F.Supp. at 1353 (exposing patient to direct risk of acquiring a fatal disease is fundamentally inconsistent with mission of patient care).

The health care provider-patient relationship, however, is not symmetrical. Defendant in this case does not occupy the same vulnerable position as patients in the case of an HIV infected dentist, because Defendant, and not Plaintiff. controls the level of risk. The reasonable medical judgment of the CDC indicates that a dentistprotects him or herself by diligently implementing the CDC recommended precautions. Compliance with the CDC recommended precautions, however, is up to the dentist. A patient has no control over the less diligent health care provider whose failure to comply with CDC guidelines significantly increases the risk of patient infection. *See, e.g., Leckelt,* 909 F.2d at 829-30 (evidence suggested that plaintiff nurse failed to comply with CDC recommendations). In *Leckelt v. Board of Commissioners of Hospital District No.1;* the plaintiff, an HIV infected nurse, asserted that as long as he followed the CDC guidelines, he posed little or no risk of transmitting HIV to his patients. 909 F.2d at 829. Evidence of his failure to

consistently comply with the CDC guidelines, as well as hospital policies based on those guidelines, undermined his argument. *Id.* at 829-30. The Fifth Circuit pointed out that by his conduct, the plaintiff prevented the defendant hospital from deciding what measures, if any, were necessary to protect the health of the plaintiff, other employees and patients. *Id.* at 830. Implicit in that finding is the Fifth Circuit's concern that no amount of reasonable medical judgment as to risk reduction can protect a patient from an incautious health care provider. *See id.* In this case, by contrast, Defendant exercises complete control over the reduction of his risk, and bears the consequences of a lapse in his diligence. That critical difference fatally undermines Defendant's efforts to apply the health care workers cases to the direct threat analysis in this case.

Indeed, the federal courts that have examined the same or factual scenarios similar to those present in this case have concluded that the risk of transmission from patient to dentist does not rise to the level of a direct threat to the health or safety of others and that refusals to treat HIV positive patients in the dental office constitutes unlawful discrimination under the ADA. *See D.B. v. Bloom,* 896 F.Supp. 166, 170 n. 6 (D.N.J.1995) (similar facts established prima facie case under ADA and no medically justified reason existed for defendant's refusal to treat HIV infected plaintiff); *United States of America v. Morvant,* 898 F.Supp. 1157, 1166-67 (E.D.La.1995). In *Morvant,* a dentist referred HIV infected patients to another dentist rather than treat them in his office.898 F.Supp at 1159. In analyzing whether the HIV infected patients posed a direct threat to the dentist, the court pointed to "a plethora of expert testimony presented by the government" that the CDC's recommendations, if

implemented, would significantly mitigate any risk. *Id.* at 1166. As in *Morvant,* this Court has made a similar finding based on the reasonable medical judgment of a public health official.[12] *See Arline,* 480 U.S. at 288, 107 S.Ct. at 1131.

Defendant has provided neither Summary Judgment quality evidence, nor judicial authority that can lead to the conclusion that treatment of Plaintiff in his office constitutes a direct threat to the health and safety of others. Plaintiff has refuted Defendant's speculative evidence with the reasonable medical judgment of a public health official, in this case, the CDC. Defendant has failed to demonstrate that CDC's judgment is medically unsupportable. *See id.* at 286 n. 15. 107 S.Ct. at 1130 n. 15. This Court, therefore, must defer to the CDC, and concludes that if Defendant implements the CDC recommended precautions, treatment of Plaintiff in his

12 The court in *Morvant* viewed the CDC recommended precautions as modifications that would eliminate the direct threat. 898 F.Supp. at 1166. This Court disagrees with that analysis. CDC recommends that dentists implement the precautions in virtually every procedure. They are universal. As such, CDC contemplates that the precautions will become part of the normal practice routine in dentistry. The Court, therefore, views the precautions as part of the practice of dentistry, and concludes that in light of modern dental methods, treatment of Plaintiff does not pose a direct threat to the health and safety of Defendant, his staff, or his patients.

office poses no direct threat to the health or safety of others.[13]

C. MHRA

The Parties have also moved for Summary

13 The implementing guidelines indicate that a public accommodation must make an individualized determination of whether the extension of services to that individual would pose a direct threat to the health or safety of others. 28 C.F.R. Sec. 36.208. Nothing in the Court's conclusion should be interpreted as preventing Defendant, upon an individualized assessment, from determining in a given case that treatment of a patient with a disability in his office would pose a direct threat to the health and safety of others. By the same token, while this opinion applies specifically to Plaintiff, the implications of the reasonable medical judgment of the CDC are that treatment of HIV positive individuals in a private dental office generally does not pose a direct threat to the health and safety of others. In other words, an individualized assessment as to whether treatment of a particular patient poses a direct threat to the health and safety of others must consider the four pronged analysis offered by the interpretive guidelines, and must defer to the reasonable medical judgment of a public health official where such judgment is available, *See id., Arline,* 480 U.S. at 288,107 S.Ct. at 1131.

Judgment on Plaintiff's MHRA claims. The Maine Supreme Court has indicated that analogous federal law informs the interpretation of the MHRA. *Bowen v. Department of Human Services,* 606 A.2d 1051, 1053 (Me.1992); *Plourde v. Scott Paper Co.*. 552 A.2d *1257,* 1261-62 (Me.1989). This is particularly true in a question of first impression. *Bowen,* 606 A.2d at 1053. Defendant seeks a separate MHRA finding only with respect to whether his office constitutes a place of public accommodation. The Court concludes that Defendant's office constitutes a place of public accommodation under the MHRA, and, therefore, applies the findings with respect to discrimination under the ADA to Plaintiff's MHRA claim.

Similar to the ADA, the MHRA prohibits public accommodations from discriminating on the basis of disability. 5 M.R.S.A. § 4592. The MHRA defines a place of public accommodation as "any establishment that in fact caters to, or offers its goods, facilities or services to, or solicits or accepts patronage from, the general public, and includes but is not limited to:"... clinics, hospitals..." 5 M.R.S.A. § 4553(8). Defendant urges construction of the MHRA in accordance with the principles of *ejusdem generis, arguing* that private dental offices are not similar enough to the enumerated public accommodations to be included under the MHRA. *See Buker v. Town of Sweden,* 644 A.2d 1042, 1044 (Me.1994) (citing *Penobscot Nation* v. *Stilphen,* 461 Aid 478, 489 (Me.1983)) (under *ejusdem generis, a* general term followed by a list of illustrations is assumed to embrace only concepts similar to illustrations). The Court disagrees.

The prefatory language prior to the enumerated list of public accommodations is extremely broad and

includes any establishment that offers its facilities or services to the general public. 5 M.R.S.A. § 4553(8). By itself, that language includes a commercial dental office. The prefatory language also indicates that the definition of public accommodations *includes* but is *not limited* to the list of illustrations. 5 M.R.S.A. § 4553(8) (emphasis added). In light both of the breadth of the language and its stated non-exclusivity, it strains neither logic nor statute to include private dental offices within the definition of public accommodations.

As indicated, the Maine Supreme Court directs courts interpreting the MHRA to look to analogous federal law for guidance, particularly in questions of first impression. *Bowen,* 606 Aid at 1053. The Court has not found a single Maine case answering the inquiry of whether a private dental office constitutes a public accommodation under the MHRA. None of the Parties, however, disagree that Defendant's office constitutes a public accommodation tinder the ADA.

Accordingly, the Court concludes that Defendant's office constitutes a place of public accommodation under the MHRA. Based on the Court's findings with respect to Plaintiff's ADA claim, the Court concludes that Defendant's conduct also violates the MHRA.

D. Constitutional Issues

Defendant challenges the constitutionality of the ADA as applied to him on three grounds: (1) Congress lacks the authority under the Commerce Clause to regulate his dental practice; (2) the ADA violates Defendant's due process right to freedom from unjustified intrusions on his personal security; and (3) the

ADA violates Defendant's due process right to freedom of contract. The Court concludes that the ADA passes constitutional muster under all three of Defendant's challenges.

1. Commerce Clause

Defendant, citing the Supreme Court's recent decision in *United States* v. *Lopez*, - U.S. - 115 S.Ct. 1624, 131 L.Ed.2d 626 (1995), argues that the activity of filling a cavity does not substantially affect interstate commerce, and that the practice of dental medicine is an area of law reserved to the states, and thus beyond the scope of Congress' Commerce Clause authority.

Congress' power to regulate commerce derives from Article I, section 8 of the United States Constitution. The Supreme Court has construed the Commerce Clause as a broad grant of regulatory authority to Congress. *Hodel* v. *Virginia Surface Mining & Reclamation Association, Inc.*, 452 U.S. *264*, 276, 101 S.Ct. 2352, 2360, 69 L.Ed.2d 1 (1981). Congress' commerce power is "complete in itself, may be exercised to its utmost extent, and acknowledges no limitations, other than are prescribed in the Constitution." *Id.* (Citing *Gibbons v. Ogden*, 9 Wheat. 1, 196, 6 L.Ed. 23 (1824)).

The Supreme Court has identified three types of activity that constitute commerce under the Commerce

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Article I, section 8 reads in relevant part, "The Congress shall have the power ... [t]o regulate Commerce . . . among the several states."

Clause. Lopez, - U.S. at ---, 115 S.Ct. at 1629-30. These include (1) the use of the channels of interstate commerce. (2) the instrumentalities of interstate commerce or persons or things in interstate commerce, or (3) those activities having a substantial relationship to interstate commerce. *Id.* In the event that the target activity of a regulation constitutes commerce, that regulation must then survive rational basis scrutiny, meaning that the regulation must be rationally related to a legitimate constitutional end, and the means chosen by Congress must be reasonably tailored to reach that end. *Heart of Atlanta Motel, Inc. v. United States;* 379 U.S. 241, 262, 85S.Ct. 348, 360, 13 L.Ed.2d 258 (1964); *Hodel,* 452 U.S. at 276, 101 S.Ct. at 2360.

The Court notes that the preliminary question of whether an activity has a substantial enough effect on commerce to fall within the boundaries of congressional commerce authority is left to the courts. *Katzenbach* v. *McClung*, 379 U.S. 294, 303, 85 S.Ct. 377, 383, 13 L.Ed.2d 290 (1964); *Lopez*, - U.S. at--, - n. 2, 115 S.Ct. at 1629, 1629 n. 2. Defendant argues that because the activity at issue--dental medicine---curs purely intrastate, this Court must find that it substantially affects commerce in order to find it within Congress' regulatory authority under the Commerce Clause. *See United States v. Robertson*, - U.S. --, --, 115 S.Ct. 1732, 1733, 131 L.Ed.2d 714 (1995) (affecting commerce test designed to define extent of congressional authority over purely intrastate activity). The Court finds that Defendant's intrastate dental practice has a substantial enough impact on interstate commerce to fall within Congress' regulatory purview under the Commerce Clause.

Under the Commerce Clause, Congress may

regulate one entity's purely intrastate activity, even if that activity has a minimal affect on interstate commerce, provided that entity belongs to a class whose aggregate activity substantially affects commerce among the states or with foreign nations. *Hodel,* 452 U.S. at 277.101 S.Ct. at 2360 (citing *Fry v. United States,* 421 U.S. 542,547, 95 S.Ct. 1792, 1795 *44* L.Ed.2d 363 (1975)); *Katzenbach,* 379 U.S. at 300-01, 85 S.Ct. at 381-82; *see also Wickard v. Filburn,* 317 U.S. 111.127-28,63 S.Ct. 82, 90-91, 87 L.Ed. 122 (1942). Thus, even if Defendant's purchase of supplies and equipment from out of state. receipt of payments from out of state insurers and credit card companies, and attendance of classes and conferences out of state by themselves do not substantially affect interstate commerce, the Court is satisfied that those commercial activities, taken together with the activities of other dentists similarly situated, have an effect on interstate commerce substantial enough to fall within the reach of congressional authority under the Commerce Clause. *See Katzenbach,* 379 U.S. at 300-01. 85 S.Ct. at 381-382; *Wickard,* 317 U.S. at *127-28, 63* S.Ct. at 89-90.

Defendant argues that none of the interstate transactions in which he engages bear on the determination of whether Congress can constitutionally regulate him.[15] Instead, Defendant asserts, the Court must

[15] Defendant also asserts that the ADA regulation of the practice of dentistry is not commerce because dentistry is an area of law reserved for the states. Notably, Defendant provides no authority for his assertion. Moreover, this argument ignores the proper inquiry inCommerce Clause cases. Under the Commerce Clause, 380 (D. Me. 1995)

focus solely on the narrow activity the ADA is attempting to prohibit, the filling of a cavity in a hospital rather than a dental office. Defendant contends that filling a cavity in a hospital rather than his office can have no greater effect on interstate commerce than possession of a gun in a "school zone," which the Supreme Court recently examined *in Lopez,-- U.S.* at--, 115 S.Ct. at 1626 (description of Gun Free School Zones Act of 1990 at issue).

In striking down the Gun Free School Zones Act, the *Lopez* Court focused on the nature of that statute, concluding that by its terms the Gun Free School Zones Act neither regulated commercial nor economic activity, nor bore any nexus to such activity. - U.S. at ---, 115 S.Ct. at 1630-31. Instead, the Supreme Court reiterated a familiar theme running through modern Commerce Clause jurisprudence: "[w]here economic activity substantially affects interstate commerce, legislation regulating that activity will be sustained." *Id.* at -, at 1630. The Supreme Court emphasized that the statute at issue in *Lopez* had nothing to do with commerce. - U.S. at - 115 S.Ct. at 1630-31.

By contrast, title III of the ADA seeks to regulate purely economic activity--in this case, the provision of dental services. Defendant is not asserting that he does not accept fees for performing dental services. Indeed, the

> Congress may regulate any economic activity that substantially affects interstate commerce. Lopez, - U.S. at------ 115 S.Ct. at 1630. As a constitutional matter, therefore, Congress may regulate Defendant's dental practice, an economic activity, provided dental medicine substantially affects interstate commerce. Id.

very activity upon which he seeks the Court to focus--the way in which he fills cavities--constitutes one of the core economic activities of any dental office. Defendant cannot credibly argue that regulation of an economic enterprise that trades in interstate commerce, even one centered on filling cavities, lacks the commercial element or nexus to Commercial activity the Supreme Court found lacking in the Gun Free School Zones Act. *See Lopez,* —, U.S. at ——— 115 S.Ct. at 1630-31.

Having determined that title III of the ADA appropriately regulates Defendant's dental practice, the Court must also determine whether title III survives rational basis scrutiny, meaning that title III must be rationally related to a legitimate constitutional end, and that the means chosen by Congress must be reasonably tailored to reach that end. *Hodel,* 452 U.S. at 276, 101 S.Ct. at 2360; *Heart of Atlanta Motel, 379 U.S.* at 262, 85 S.Ct. at 360. Defendant does not contest title III on rational basis grounds, and the Court concurs in the judgment of the *Morvant* Court that title III meets this minimal scrutiny. *See* 898 F.Supp. at 1167 (up-holding constitutionality of ADA through application of rational basis scrutiny).

2. Freedom from Unjustified Intrusions on Personal Security

Defendant next contends that by forcing him to treat HIV positive patients in his office, the ADA contravenes the fundamental right to freedom from unjustified intrusions on his personal security which derives from the Fifth and Fourteenth Amendments to

the Constitution. While the Court acknowledges that the Due Process Clauses of the Fifth and Fourteenth Amendments protect such a fundamental right or liberty interest, the Court is not persuaded that Defendant establishes such an interest in this case. *See Youngberg* v. *Romeo,* 457 U.S. 307, 315-16, 102 S.Ct. 2452, 2457-58, 73 L.Ed.2d 28 (1982) (personal security interest recognized in context of confinement by state); *Ingraham* v. *Wright,* 430 U.S. 651, 673, 97 S.Ct. 1401, 1413, 51 L.Ed.2d 711 (1977) (personal security interest recognized in context of corporal punishment of child in public school). None of the cases illuminating the fundamental right to freedom from unjustified intrusions on personal security rest on factual situations even remotely similar to this case.[16] The Court declines to expand this fundamental right to this factual situation.[17]

16 One of the Cases upon which Defendant bases his personal security argument, *Russell* v. *Steck,* 851 F.Supp. 859,863 (N.D.Ohio 1994), has been expressly rejected by the *Sixth* Circuit. *Foy v. City of Berea,* 58 F.3d 227, 231 (6th Cir.1995).

17 The ADA does not require Defendant to treat anyone who poses a direct threat to the health and safety of others. 42 U.S.C. § 12182(b)(3).

The Court has concluded that treatment of Plaintiff in Defendant's dental office poses no significant risk to the health and safety of others. Thus, even if Defendant correctly identified an application of the fundamental right to freedom from unjustified intrusions on his personal security, that right would not

3. Freedom of Contract

Defendant asserts that the ADA also violates his fundamental right to freedom of contract, also deriving from the Fifth and Fourteenth Amendments to the Constitution, by forcing him to accept patients against his will. Defendant relies on *Meyer* v. *Nebraska,* a 1923 case in which the Supreme Court, in fleshing out a due process privacy right, mentioned liberty of contract among other interests protected by due process. 262 U.S. 390.
399, 43 *S.Ct. 625.* 626, 67 L.Ed. 1042 (1923). The *Meyer* Court cited *Lochner v. New York,* 198 U.S. 45, 25 S.Ct. 539, 49 L.Ed. 937 (1905), among other cases, *as* support for the fundamental right to freedom of contract. *Id.* The *Lochner* case and its progeny employed freedom of contract to strike down social legislation regulating aspects of the work place. *See, e.g., Lochner,* 198 U.S. at 52, 25 S.Ct. at541 (maximum hours statute violated freedom of contract); *Coppage v. Kansas,* 236 U.S. 1, 6, 35 S.Ct. 240, 240, 59 L.Ed. 441 (1915) (statute prohibiting employers from requiring employees *to* sign agreements not to join Unions violated freedom of contract); *Adkins v. Children's Hospital,* 261 U.S. 525, 539, 43 S.Ct. 394, 395, 67 L.Ed. 785 (1923) (minimum wage for women statute violated freedom of contract). The Supreme Court, however, has dramatically curtailed the due process right to freedom of contract which Defendant seeks to invoke against the ADA.[18]

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prevent Congress from applying the ADA to him in this context.

18 In *Planned Parenthood v. Casey.* the Supreme Court discussed the demise of the *Lochner* line

In *West Coast Hotel Co. v. Parrish,* the Supreme Court expressly overruled Adkins, and commenced a reigning in of the due process right to freedom of contract. *See* 300 U.S. 379.391, 400, 57 S.Ct. 578, 581, 586, 81 L.Ed 703 (1937). The Parrish Court announced that "[l]iberty under the Constitution is ... necessarily subject to the restraints of due process, and regulation which is reasonable in relation to its subject and is adopted in the interests of the community is due process." 300 U.S. at 391, 57 S.Ct. at 581. The rigor with which courts scrutinize economic legislation since *Parrish* has continued to decline. *See Williamson* v. *Lee Optical Co. of Oklahoma Inc., 348* U.S. 483, 488, 75 S.Ct. 461.464, 99 L.Ed. 563 (1955) ("it is enough that there is an evil at hand for correction and that it might be thought that the particular legislative measure was a rational way to correct it"). In *Williamson v. Lee Optical,* for example, the Court was satisfied that it could contemplate any reason for the legislative action at issue, setting an extremely deferential standard of review. 348 U.S. at 487, 75 S.Ct. at 464. In light of *Parrish* and its progeny, which Defendant has declined to discuss, the Court determines that due processfreedom of contract fails to provide grounds for declaring the ADA unconstitutional. [19]

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of cases, noting that it serves as one of only two examples in history in which the Court, despite the principles of *stare decisis,* reversed a line of cases. See 505 U.S. 833. 360. 112 S.Ct. 2791, 2812, 120 L.Ed.2d 674 (1992).

19 The Court acknowledges that the due *process* cases upon which it relies examined state statutes under the Due Process Clause of the

Conclusion

The Court concludes that Defendant's refusal to treat Plaintiff in his dental office constitutes a violation of title III of the ADA and the MHRA. In so concluding, however, the Court in no way suggests that Defendant's motivation is suspect. The position taken by Defendant is not an unreasonable one. The Court is sensitive to Defendant's concerns about the possibility of the transmission of HIV from a patient to him, his staff and other patients, particularly in light of how much science has yet to learn about HIV. The arguments raised by Defendant to support his position are not without merit.

This case ultimately boils down to statutory analysis and evidence. Although Defendant raises some frightening possibilities about the transmission of HIV and the ramifications of those possibilities on dentists, Plaintiff offers the reasonable medical judgment of a public health official that the risk to Defendant does not rise to the level of a direct threat. While that reasonable

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Fourteenth Amendment. A similarly deferential standard applies with respect to due process challenges to federal statutes. See e.g., *Duke Power Co. v. Carolina Environmental Study Group*, 438 U.S. 59, 83.98 S.Ct. 2620, 2635, 57 L.Ed.2d 595 (1978) (upholding federal regulation in absence of evidence Congress acted irrationally or arbitrarily).

medical judgment may change in thefuture as the state of knowledge on HIV transmission changes, the Court must make a present determination based on current medical knowledge. 28 C.F.R. Sec. 36.208(c); *Arline,* 480 U.S. at 288, 107 S.Ct. at 1131. The Court has made its determination, and now concludes that Defendant has violated title III of the ADA and the MHRA.

Disposition -

For the above reasons. the Court:

(1) GRANTS Plaintiff's Motion for Summary Judgment;

(2) GRANTS the Government's Motion for Summary Judgment on the constitutional issues;

(3) GRANTS the MHRC's Motion for Summary Judgment

(4) DENIES Defendant's Motion for Summary Judgment.

SO ORDERED.

Enforcement

The Court *has* determined that Defendant's conduct violated title III of the ADA, specifically, 42 U.S.C. § 12182(b)(2)(A)(i), and the MHRA, specifically 5 M.R.S.A. § 4592(1). Under both statutes, the Court retains broad authority to grant equitable relief for violations. *See* 42 U.S.C. § 12188(b)(2); 5 M.R.S.A. § 4613. Plaintiff seeks injunctive and declaratory relief under the ADA and

MHRA, as well as civil penal damages under the MHRA. Plaintiff also seeks attorney fees and costs.

Based on the factual record assembled for these Motions, it is *ORDERED:*

(1) Defendant is enjoined from refusing to provide treatment in his office to individuals infected with HIV solely on the basis off their HIV positive status, without making an individualized assessment, based on current medical knowledge and the reasonable medical judgment of public health officials, that in-office treatment of any such individual poses a direct threat to the health and safety of others;

(2) the Parties must submit memoranda to this Court relating to any further injunctive relief requested by Plaintiff, civil penal damages, if any, under the MHRA, and attorney fees and costs. Those memoranda shall be submitted on a schedule to be agreed upon by the Parties and approved by the Court.

UNITED STATES COURT OF APPEALS
FOR THE FIRST CIRCUIT

No. 96-1643

SIDNEY ABBOTT, ET AL.,
Plaintiffs-Appellees,

v.

RANDON BRAGDON, D.M.D.,
Defendant-Appellant.

BEFORE

*

ALDRICH, SENIOR CIRCUIT JUDGE,
SELYA, BOUDIN, STAHL AND LYNCH,
CIRCUIT JUDGES.

ORDER OF COURT

Entered: April 2[illegible], 1997

The panel of judges that rendered the decision in this case having voted to deny the petition for rehearing and the suggestion for the holding of a rehearing en banc having been carefully considered by the judges of the Court in regular active service and a majority of said judges not having voted to order that the appeal be heard or reheard by the Court en banc.
It is ordered that the petition for rehearing and the

suggestion for rehearing en banc be denied.

By the Court:

WILLIAM H. NG, CLERK
Chief Deputy Clerk

*
Chief Judge Torruella, dissenting.
[cc: Messrs. McCarthy, Sfikas, Klein, Carnes, Bagenstos, Greenwald and Ms. Levin]

UNITED STATES DISTRICT COURT
DISTRICT OF MAINE

SIDNEY ABBOTT,
Plaintiff

Cvil Action No. 94-0273-B

vs.

RANDON BRAGDON, D.M.D.,
Defendant

AFFIDAVIT OF RANDON BRAGDON, D.M.D.

The affiant, Randon Bragdon, D.M.D., being duly sworn deposes and says:

1. My name is Randon Bragdon. I am of legal age and under no legal disability. I have personal knowledge of the facts stated in this affidavit and know them to be true and correct.

2. I hold a Bachelor of Arts in Physics from the University of Maine.

3. After I received by degree in physics, I worked for two years as the training engineer for General Electric. Later, I worked for two years as an electro-optical engineer for Block Engineering, and then started by own electrical contracting business in Maine called Bragdon Electric.

4. In 1975, I began dental school at Tufts

Dental School. I graduated from Tufts in 1978 and received my D.M.D. (Doctor of Dental Medicine). In 1978, I received a license in Maine to practice dentistry. Since then, that license has never been suspended nor revoked.

5. I began my private practice of dental medicine in Bangor in 1978. Since then, I have seen over 8,000 patients and have performed thousands of invasive dental procedures, including filling thousands of cavities.

6. When Ms. Abbott visited my office on September 16, 1994, I found that she had a cavity near her gum line on a back, lower, left-side tooth. In technical terms, this would be called a buccal lesion at the cervix of tooth number 19.

7. When I fill a cavity such as Ms. Abbott's, I start by giving one or more injections of local anesthetic into the tissues surrounding the tooth. This process involves grasping the area to be injected with my thumb and stabilizing the patient's head and jaw with my other fingers as I insert the needle beside my thumb, withdraw the needle, and often inject again to ensure complete nerve blockage. During this process, if the patient starts to bite down, which is common, or flinches, I can, and have, stuck myself with the needle just before, between, or after injections, even if I was not careless. Such accidents, though relatively infrequent, are inevitable.

8. To remove the decay from a cavity such as Ms. Abbott's, I and other dentists start by using a high speed bur (patients often call it a drill) that turns at 400,000 revolutions per minute. In contrast, a typical high speed electric drill for a home workshop operates at

approximately 1200 revolutions per minute.

9. The drilling process usually generates aspattering of blood or bloody saliva, especially when the cavity is next to the gum line.

10. To keep the tooth from overheating when it is being drilled at such a high speed, my (and other dentists') handpiece emits a continuous cooling spray of water and air. As this spray hits the tooth, gum, and rotating bur, an aerosol mist is generated consisting of tiny droplets of water, blood, and bloody saliva. These droplets remain suspended in the air and drift up into the dentist's face, or they eventually land and remain on other surfaces three to six feet away.

11. Attached to this affidavit is a copy of page 73 of a book called Practical Infection Control in Dentistry (Lea & Febiger 1991) written by James Cottone, Geza Terezhalmy, and John Molinari. John Molinari is one of Ms. Abbott's experts in this case.

12. The narrative indicates that the splashing of saliva illustrated in figures 1-6 is from a single, class-II operative procedure on a mandibular second molar. In layman's terms, this is filling a single cavity on a back, lower tooth, such as Ms. Abbott's. In my experience, having performed hundreds of such procedures, the figures accurately depict the type of splashing of saliva in such procedures. Much of the saliva in such procedures also contains blood in it, and as can be seen, the bloody saliva spreads over many surfaces.

DATED: September 18, 1995 /s/Randon Bragdon, D.M.D.

STATE OF MAINE
PENOBSCOT, ss

September 18, 1995

Personally appeared the above-named Randon Bragdon, who first being duly sworn, made oath that the foregoing affidavit which he has signed and to which he subscribed is based on his own personal knowledge and that the facts set forth therein are true.

Before me,
/s/

Notary Public

VICKY J. NEALE NOTARY PUBLIC
My Commission Expires 0ctober 23, 2000

Fig. 4–2

73a

Fig. 4–3

Fig. 4–4

74a

Fig. 4–5

Fig. 4–6

UNITED STATES DISTRICT COURT
DISTRICT OF MAINE

SIDNEY ABBOTT,
Plaintiff **Civil Action No. 94-0273-B**

vs.

RANDON BRAGDON, D.M.D.,
Defendant

SECOND AFFIDAVIT OF RANDON BRAGDON, D.M.D.

I, Randon Bragdon, D.M.D., being duly sworn, state as follows:

1. In his supplemental affidavit, paragraph 11, Ms. Abbott's expert witness John A. Molinari, Ph.D., made the following statement:

> **According to Dr. Bragdon's Statement of Facts, his practice is to place his fingers in the patient's mouth next to the needle while he injects the anesthetic. The currently recommended procedure involves removing one's hand from the injection site, retracting the cheek with a mirror, and injecting anesthetic with the other hand. This method virtually eliminates any risk that a dentist will be stuck with a needle during the injection of a local anesthetic.**

2. The recommendation made in this statement most likely comes from a person who has no experience giving intraoral injections. It does not surprise me that this novel but dangerous technique is not described in the

book Practical Infection Control In Dentistry Dr.Molinari co-authored with James A. Cottone, D.M.D., M.S. and Geza T. Terezhalmy, D.D.S., M.A.

3. Dr. Molinari also failed to alert the audience to this novel technique during his speech at the American Conference on the Dental Management of HIV Disease held in Chicago June 16-18, 1995. The title of his speech was "Infections of Risk to Healthcare Providers" and did include discussion of percutaneous injuries including needlesticks. Furthermore, another plaintiff's expert witness Dr. Donald Marianos gave a speech at the same meeting entitled "Update on Transmission Risks for Providers, Patients Needlestick, Splash Injury Implications, and Protocol for Healthcare Providers." Dr. Marianos also failed to alert the audience to this new technique for giving injections. Had he done so, I believe the audience of experienced professionals would have been incredulous.

4. Another plaintiff's expert witness, Dr. Deborah Greenspan, in the book AIDS and the Mouth she co-authored with Dr. John S. Greenspan, Dr. Morten Schiodt, and Dr. Jens J. Pindborg(deceased) makes no mention of such a technique. In fact, Dr. Greenspan states on pages 180 and 181: "In 1987, an ADA survey reported that general dentists gave an average of 177 local anesthetic injections per month and that the rate for needlestick injuries was 1.5 per 100 injections."

5. Also attached is the program brochure for the three day conference entitled "Frontline Healthcare Workers: National Conference on Prevention of Sharps Injuries and Bloodborne Exposures" held in Atlanta on August 14-16, 1995. This conference did not discuss Dr.

Molinari's novel solution for prevention of needlesticks either.

6. It is well-known that the vast majority of needlesticks which occur during dental injections are the result of unexpected movements of either the patient or someone else in or entering the operatory. Most people do not realize that the reason that most needlesticks occur in the mouth is that it is the lesser of two evils. When control of a needle is lost either in or approaching the mouth by anunexpected movement, the patient must be protected from potentially serious injury. Often, the only practical way of preventing injury to the patient is for the dentist to position his or her hand and fingers so as to steady the head and jaw and to block an errant needle. Better the dentist be stuck than the patient seriously injured.

7. Dr. Molinari may not realize it, but the technique he advocates is based upon a cavalier attitude toward needle injuries to patients. Without exaggeration, using his proposed technique, I would have punctured at least two eyes, to say nothing of needle punctures of the face, lips, out through the cheek, into the throat, etc. Every injection is an intense moment in a dental procedure. Any patient may move unexpectedly or have an unexpected complication during any injection. I have had a well-behaved boy drive an explorer into the bone of my left index finger which was holding a mirror in a retraction capacity when he was startled by someone entering the operatory. (An explorer Is the "shepherd's crook" used to examine teeth.) An explorer is much more user friendly than a needle. It was medically preferable for my finger tohave been punctured than for the explorer to have gone out through his cheek.

8. Most persons can readily visualize unexpected patient movements during dental injections such as turning the head, movements of the lower jaw and tongue, flailing and grasping with the arms and hands, twisting and turning the body and kicking. But there are other important causes of unexpected movements (e.g. the patient may faint, have a epinephrine reaction, have a panic attack, lift a leg up and bring it down abruptly causing the head to reactively jerk up from the chair several inches, or someone (usually a parent or sibling) may lean on the foot of the dental chair moving it).

9. I have attached two color copies of pages from the book Handbook of Dental Local Anesthesia by Hans Evers, D.D.S. and Glenn Haegerstam, M.D. This book was published in 1981 before universal precautions. Therefore, the dentists and assistants are not wearing masks, gloves or protective eyewear. However, the pictures are illustrative and the text is still informative.

10. The technique advocated by Dr. Molinari is ill conceived and inherently dangerous to patients. The reason, perhaps, that Dr. Molinari does not appreciate the inherent dangers of his proposed method of dental intraoral injections is that, to my knowledge, he has never given dental injections. He is a Ph.D , not a dentist or an M.D.

11. I incorporate as though fully set forth herein the statements contained in paragraphs 1-4 of my previous affidavit dated September 18, 1995.

Subscribed and sworn to by me on this 18th day of

October, 1995.

/s/ Randon Bragdon
D.M.D.

STATE OF MAINE
PENOBSCOT, ss.
Oct. 18 , 1995

Personally appeared the above-named Randon Bragdon, D.M.D., who, first being duly sworn, made oath that the foregoing affidavit which he has signed and to which he subscribes is based on his own personal knowledge and that the facts set forth therein are true with the exception of those facts which are based upon his information and belief and that, as to those facts, he believes the information to be true.

Before me,

/s/
Name: Susan Tuholski
Notary Public My Commission Expires
24 June 2001

Attorney-at-Law

INTERROGATORY NUMBER 4

Describe in detail what occurred when you appeared at Dr. Bragdon's office as is alleged in paragraph 7 of your complaint.

RESPONSE TO INTERROGATORY NUMBER 4

OBJECTION: Ms. Abbott objects to Interrogatory Number 4 because the word "detail" is vague and unclear. Without waiving this objection, Ms. Abbott answers Interrogatory Number 4 as follows:

When I arrived at Dr. Bragdon's office, a receptionist asked me to fill out a medical questionnaire form. The form included questions about whether I was HIV-positive or had AIDS. I filled out the questionnaire and indicated that I was HIV-positive. I returned the form to Dr. Bragdon's receptionist. I then entered Dr. Bragdon's treatment room. Dr. Bragdon examined my mouth by probing with instruments in the general area where I indicated I had a toothache--the lower left corner of my mouth. Dr. Bragdon told me that I had a cavity that needed to be filled. Dr. Bragdon also asked me if I had any medical conditions. I told him that I was HIV-positive. He also asked if I had any symptoms. I answered "no." He then indicated that he did not treat anyone with an infectious disease including HIV or AIDS in his office. He said that he would treat me in a hospital. I asked Dr. Bragdon if I would be required to pay for the cost of the hospital. He said that I would be required to pay for the cost of the hospital. I told Dr. Bragdon that I would think about it and get back to him.

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(D) Qualitative Assessment of HIV Risk

The CDC estimates that there are between 1 million and 1.5 million HIV infected persons in the U.S. (Ex. 6-356). *As* of September 30, 1990 occupational information was available for 122,159 of the AIDS cases reported to CDC. Of these, 5,815 or 4.8% were identified as healthcare workers (Ex. L6-666) (note:Exhibit L6-666 is an updated version of Exhibit 6-378). This proportion is similar to the proportion of the labor force employed in the healthcare field.

Most healthcare workers with AIDS also belong to some other group which places them at high risk for HIV infection (e.g. homosexual men, intravenous drug users, etc.). There is, however, a statistically significantly larger proportion of healthcare workers with no known risk factors (6%), than the proportion of other AIDS cases (i.e. individuals with AIDS not in the healthcare field) with no known risk factors (3%). As of September 30, 1990, there were 337 reported cases of healthcare workers with AIDS with no known risk factors. These cases are being studied further. CDC reports that 89 could not be assigned to a risk group after follow-up. 65 had either died or refused to be interviewed, and 203 were still under investigation (Ex. L6-666).

Because the prevalence of HIV- infection among healthcare and other workers with occupational exposure to blood or other potentially infectious material is unknown, it is not possible to estimate an "observed" infection rate. Therefore, it is not possible to quantify the risk as was done for occupational exposure to HBV. Certain deductions, however, can be made. It is known that the virus is present only in blood or certain body fluids and that exposure to these fluids from an HIV-infected person puts one at risk for HIV-infection.

Therefore, workers who have occupational exposure to blood or certain body fluids are at risk.

No case of infection due to casual contact with these fluids has been documented. Rather, infection can occur only if infectious fluids enter the body either through a percutaneous or mucosal route, although exposure by either of these routes does not mean that infection will occur. In several prospective studies of healthcare workers with HIV exposures, seroconversions have been observed. Although the rate of infection is low, it is not insignificant.

. . .

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Dental Facilities: Dentists, dental hygienists, dental assistants and dental assistants and dental laboratory technicians are continually exposed to blood and bloody saliva during almost all dental procedures. Because saliva in dental procedures is so likely to contain blood, the CDC recommends personal protective equipment to practitioners for all dental procedures, (Ex. 6-316). The record contains many references to occupational hepatitis B infections in dental health professionals. (Exs. 6-68;6-441)

Ms. Karen Boulton, a dental hygienist who testified at the public hearings, gave examples of preventive dental hygiene services, including scaling and polishing of the teeth, periodontal root planing and subgingival curettage. She estimated that "almost 100 percent of [her] patients in private practive exhibit some extent of bleeding during routine treatment." (Tr. 1/16/90, pp.563-565)

A number of commenters who considered this issue agreed that these supported a standard for dental operations (Exs. 11-162; 11-177;11-327)

The position of the American Dental Association (ADA) regarding the scope of the standard and the major provisions was given by Dr. Enid Neidle in her testimony at the public hearing on the proposed rule. She stated, in part:

The purpose of OSHA in protecting, through this proposed rule, the health care worker is clear, unequivocal, and laudable. The American Dental Association shares that purpose. Over the past 15 years, the Association has invested substantial resources in the development of educational materials to prevent the transmission of infection in the dental office. (Dr. Enid Neidle, ADA. Ex. 58)

However, the ADA stated its belief that OSHA overstated the risks to dental healthcare workers in the preamble to the proposed standard.

* * *

In any case, we will address the points made by the ADA to support their contention that OSHA has overestimated the occupational risk faced by dentists. First, it would be more complete to say that the Klein study, cited above in the quote from the ADA, found five (5) HIV infected dentists, not one (Ex. 6-366). Four of these individuals were found to have other risk factors leaving one occupational HIV infection in a group of 1,132 dentists. A finding of 1 occupational HIV infections in a group of 1,132 dentists, or 2 occupational HIV infections in a group of 4,973 for that matter, is not "extremely low" or "minimal" or "insignificant" as the ADA has argued. On the contrary, this finding is compatible with a finding of a 1 in 1,000 risk of a fatal illness as the result of an occupational exposure. In the

"Benzene Decision," the Supreme Court clearly defined this as a significant risk. (See Section VI: Significance of Risk) This does not take into consideration the additional occupational risk caused by HBV. The ADA's contention that the HIV risk in dentists is lower than that of the general population is confusing and is not supported by the data the ADA cited in their posthearing comments. They use the figure "2 HIV infected dentists per 4,973" and as we have noted above, the Klein study alone found 5 HIV infected dentists (5 per 1,132). There is no information in the record to indicated how many other HIV positive dentists with other risk factors were found in the other group that make up the total 4,973 tested individuals. Second, in the past it has been relatively uncommon for dental hygienists, dental assistants and dental laboratory technicians to be tested for HIV following occupational exposure. Since an HIV infection may be silent for many years before AIDS develops, it is highly unlikely that untested individuals would know whether or not they were infected with HIV.

* * *

DEPARTMENT OF HEALTH & HUMAN SERVICES
Public Health Service

Centers for Disease Control
and Prevention (CDC)
Atlanta Georgia 30333
OCT 30 1995

The Honorable Daniel P. Moynihan
United States Senate
Washington, D.C. 20510-3201

Dear Senator Moynihan:

I am responding to your letter on behalf of Dr. Paul Dworkis regarding his concerns about the efficacy of barrier precautions, such as gloves and masks, to prevent the transmission of bloodborne organisms during the provision of dental care.

The Centers for Disease Control and Prevention (CDC) published Recommended Infection Control Practices for Dentistry in 1986 and updated them in 1993. CDC infection control recommendations are intended to address a broad spectrum of dental procedures and are developed and updated with advice from outside consultants, including experts in infection control and public health. While many infection control recommendations are based on extensive epidemiologic data, others are based on established principles of infection control.

Gloves and masks (also known as personal protective equipment) are worn to provide a protective barrier and to prevent gross contamination of skin and mucous membranes of health care workers when touching blood or saliva contaminated with blood. The efficacy of these precautions (combined with other measures, including handwashing after removing gloves) to reduce blood contact with skin and mucous membranes has been well documented in the scientific literature.

Enclosed are references that support the use of personal protective equipment during medical and dental procedures. In addition, enclosed are the two latest articles that establish the efficacy of such practices.

I hope this information is helpful.

Sincerely,

/s/
David Satcher, M.D., Ph.D.
Director

Enclosures

(JAMA. 1991;265:1123-1128)

Are Universal Precautions Effective in Reducing the Number of Occupational Exposures Among Health Care Workers?
A Prospective Study of Physicians on a Medical Service

Edward S. Wong, MD; Jennifer L. Stotka, MD; Vernon M. Chinchilli, PhD; Denise S. Williams, MT; C. Geri Stuart, MT; Sheldon M. Markowitz, MD

Using a daily questionnaire, we prospectively studied 277 physicians from two hospital medical services for incidents of exposure to blood and body fluids and barrier use before and after the implementation of universal precautions. We found that implementation significantly increased the frequency of barrier use during exposure incidents from 54% before implementation to 73% after implementation of universal precautions. Implementation led to a decrease in the number of exposure incidents that resulted in direct contact with blood and body fluids (actual exposures), from 5.07 to 2.66 exposures per physician per patient care month, and to an increase in averted exposures in which direct contact was prevented by the use of barrier devices, from 3.41 exposures per patient care month before implementation to 5.90 exposures per patient care month after implementation. Implementation affected neither the types of body fluid or procedures involved nor the overall rate of exposure incidents (8.5 per patient care month) but, through an increase in barrier use, it *did* prevent direct contact with blood and body fluids and thus converted what would have been an actual exposure into an averted one. We conclude that universal precautions were effective in reducing the risk of occupational exposures among physicians on a medical service.

* * *

COMMENT

In August 1987, the CDC published recommendations for the universal use of protective barrier devices to protect health care workers ~ fromblood-borne pathogens.[12] However, despite the theoretical benefits of UPs and strong endorsements for their adoption, little evidence exists to show that UPs will protect health care workers as intended. Our study is one of the few to demonstrate that UPs can reduce the number of occupational exposures. We demonstrated by prospective surveillance that implementation of UPs was associated with a significant reduction in the number of actual exposures sustained by physicians from 5.07 exposures per PCM in the preimplementation period to 2.66 exposures per PCM in the postimplementation period. We attribute this benefit largely to the effect of implementation on barrier use, since the decrease in actual exposures was inversely proportional to the increase in the frequency of barrier use and to the increase in the number of averted exposures (Table 3). Although we cannot be certain that implementation was the only factor, we are unaware of any other factor or change in patient care routine occurring during the study period that may have contributed to this reduction. In particular, we considered the number of patients admitted to study wards to be an important and potentially confounding variable since admissions directly affect the number of diagnostic procedures and patient care manipulations performed and, therefore, exposure risk. However, the monthly census was similar in both the preimplementation and postimplementation periods, and

regression analysis found it not to be a contributing factor (Table 4).

To the extent that implementation reduced the number of actual exposures, it should also reduce the risk of occupationally acquired blood-borne infections. Variables that affect acquisition include the cumulative number of exposures, the transmission rate per exposure, and the prevalence of disease. [21] For HIV infection, needlestick injuries carry the highest risk of transmission at 0.4% per episode of exposure. Since the rate of needlestick injuries fell from 0.39 to 0.15 episodes per *PCM* (a reduction of 62%), we estimate that the implementation of UPs should reduce the risk of occupational HIV infection by the same rate (62%) since the other variables (transmission rate and prevalence) remain unchanged. For HBV, implementation of UPs should have an even greater impact since in most localities the prevalence of HBV is higher than HIV, the efficacy of transmission per exposure episode is greater (6% to 32% per exposure episode vs 0.4% for HIV), and exposures other than needlestick injuries (mucous membrane or nonintact skin exposures) have been known to transmit infection.[22-24]

* * *

DEPARTMENT OF HEALTH & HUMAN SERVICES
Public Health Service

Food and Drug Administration
Bethesda MD 20892

Date:	April 23, 1992
From:	Director, Center for Biologics Evaluation and Research
Subject:	Revised Recommendations for the Prevention of Human Immunodeficiency Virus (HIV) Transmission by Blood and Blood Products
To:	All Registered blood Establishments

INTRODUCTION

On September 25, 1991 the Food and Drug Administration (FDA) licensed the first enzyme immunoassay (EIA) for the simultanecus detection of antibodies to human immunodeficiency virus type 1 (HIV-1) and type 2 (HIV-2) in human serum and plasma. This test, manufactured by Genetic Systems Corporation, is based on whole viarl lysate antigens. Another combination EIA, based on recombinant antigens, and manufactured by Abbott Laboratories, received a license on Febraury 14, 1992. These tests are indicated for detection of antibodies to HIV-1 and/or HIV-2 in human serum or plasma. the tests may be used for donor screening and as an aid in the diagnosis of potential infection with HIV-1 and/or HIV-2.

The availability of licensed screening tests for combined detection of anitbodies to HIV-1 and HIV-2 provides blood centers with the capability of performing routine HIV-2 screening without the need to implement a second test in addition to the curremtly required test for antibodies to HIV-1. Based on this possibility, the issue of whether to recommend donor screeening for HIV-2 was discussed at a meeting of the Blood Products Advisory Committee on SEptember 27, 1991.

At the time of the meeting, only 31 cases of HIV-2 infection in the U.S.A. had been reported to the Centers for Disease Control, despite extensive surveillance studies. (One additional case has been reported since then.) These data indicated that HIV-2 infections presently represent only a minimal risk to the safety of the blood supply. Nevertheless, from a public health persepective, use of combination tests offers an opportunity to further protect the safety of blood recipients against HIV-2 infection without requiring an increased number of tests in blood centers. Donor screening for anitibodies to HIV-2 would also reduce the need for coninuted surveillance studies which are expensive, difficult to sustain, and might nevertheless fail to prevent the earliest cases of HIV-2 transmission by blood products.

For these reasons, and with the concurrence of the Blood Products Advisory Committee, the FDA recommends that all establishments collecting whole blood, blood components, Source Plasma or Source Leukocytes implement a licensed test for detection of antibodies to HIV-2 by June 1, 1992. For this purpose the Agency finds acceptable either the use of a licensed combination test for detection of antibodies to HIV-1 and HIV-2 or the use of

two separate tests licensed for detection of these antibodies.

To implement HIV-2 testing, modifications are necessary to the current recommendations for the prevention of HIV transmission by blood and blood products. The modifications affect donor selection and deferral procedures, the HIV reentry algorithm, Public Health Service recommendations for additional medical follow-up and counseling, and the management of potentially infectious units from prior collections. For this reason, the FDA is issuing a revised set of recommendations which replaces the Agency's memoranda to blood establishments dated February 5, 1990 and December 5, 1990.

The FDA further discussed donor deferral criteria for HIV at a meeting of the Blood Products Advisory Committee on March 13, 1992. Based on updated scientific data which were presented at this meeting, modifications have been made to some of the deferral criteria. The changes include a 12 month instead of lifetime deferral for sexual partners of persons with high risk behavior, and voluntary instead of recommended use of Confidential Unit Exclusion. Also, the FDA is discontinuing its recommendation for documentation in the donor record of the medical history of HIV associated signs and symptoms.

* * *

RECOMMENDATIONS FOR THE PREVENTION OF HUMAN IMMUNODEFICIENCY VIRUS (HIV) TRANSMISSION BY BLOOD AND BLOOD PRODUCTS

Revised April, 1992

I. AIDS EDUCATION, SELF-EXCLUSION AND CONFIDENTIAL UNIT EXCLUSION

A. Educational Information to Permit Self-Exclusion

All persons donating blood or plasma for transfusion or further manufacturing use should receive both written information and oral explanation about the safety of blood products in relation to AIDS epidemiology and the implications for donors who have engaged in certain high-risk activities. Donors should not be considered suitable unless information about these risks can he communicated in the language appropriate to each donor (including appropriate communication to persons with impaired vision or hearing) and the educational format is constructed to be culturally sensitive to promote comprehension. The procedures applied should provide an opportunity at each visit for the donor to consider the information and to make an informed and private decision about whether to donate. In some settings it is appropriate to use abbreviated materials for frequent, repeat donors such as autologous donors or serial Source Plasma donors who may be screened as often as twice in a seven day period, and who are familiar with the program employed in the establishment.

Appropriately trained blood establishment personnel

should talk with each prospective donor about risk factors for HIV infection. The focus should be on behavior and not on stereotypes. For example, many men who have had male-to-male sexual experiences do not identify themselves as "homosexual," "gay," or "bisexual," but would identify with the description "sex with another man."

The direct questions concerning risk behaviors for HIV infection should be presented to potential donors orally, if possible. The technique demonstrated to be most effective by an FDA sponsored field trial included the use of an illustrated answer sheet for the donor to record a reply as the list of questions (see addendum) was read to the donor. The records for unsuitable donors do not need to include the answers to each of the direct questions about risk behavior, but may indicate that deferral was based on risk behavior history. If the questions are presented orally, the standardoperating procedures should ensure that questions are not abridged and each donor record should indicate that satisfactory responses were received. Each donor record should also accurately reflect staff responsibility for this portion of donor screening procedures and document the decision concerning donor suitability or deferral.

The educational material on AIDS should also include a description of HIV associated clinical signs and symptoms including:

- Unexplained weight loss
- Night sweats
- Blue or purple spots typical of Kaposi's sarcoma on or under the skin, or on mucous membranes
- Swollen lymph nodes lasting more than one month

- Persistant white spots or unusual blemishes in the mouth
- Temperature greater than l00.5 F for more than 10 days
- Persistent cough and shortness of breath
- Persistent diarrhea

It is not necessary for the donor record to include documentation of the donor history for HIV related signs and symptoms. It is necessary that donors be informed about HIV associated signs and symptoms so that they may self-defer if these conditions are present.

B. Criteria for the Exclusion of Unsuitable Donors Who Are at Increased Risk for HIV

The minimum information presented to potential blood and plasma donors at every visit should indicate clearly that persons meeting any of the following descriptions or having engaged in any of the following activities should not donate blood or blood components to be used for transfusion or further manufacturing:

* Persons with clinical or laboratory evidence of HIV (AIDS virus) infection.[1]

* Men who have had sex with another man even one time since 1977

---

[1]At this date, the most recent criteria from the CDC appear in MMWR 1987 ; 36(S-1) :1-9. A revision of these criteria is anticipated in the near future.

* Past or present intravenous drug users

* Persons with hemophilia or related clotting disorders who have received clotting factor concentrates

* Men and women who have engaged in sex for money or drugs since 1977 injury or accidental needlestick) or through contact with an open wound, non-intact skin, or mucous membrane during the preceding 12 months should be deferred.

* Persons who have had sex with any person meeting the above descriptions during the preceding 12 months .

* Persons who have had, or have been treated for, syphilis or gonorrhea during the preceding 12 months, or who have had a reactive screening test for syphilis in the absence of a negative confirmatory test in the last 12 months. (Any synonyms for these diseases that may be appropriate to the local donor population should be included in the donor questionnaire and oral interaction.)

[Note: Refer to FDA's memorandum to all blood establishments dated December 12, 1991 for additional discussion.]

* Persons who have received a transfusion of whole blood, a blood component (e.g. cryoprecipitated AHF, platelets) or a clotting factor concentrate (e.g., Factor IX, Human) within the past 12 months. Receipt of an FDA-licensed plasma derivative other than a clotting factor concentrate (e.g., Albumin [Human]) is not a basis for

exclusion.

* Persons born in or emigrating from countries where heterosexual activity is thought to play a major role in transmission of HIV-2 infection (i.e. sub Saharan Africa and islands located near these areas of Africa[2]) and persons who have had sex with any person meeting the latter description .

  [Note: These criteria should be discontinued upon implementation of a test for antibodies to HIV-2 no later than June 1, 1992.]

Sample direct questions on behavior related to increased risk of HIV infection are provided as an Addendum to this document.

During the health history interview, a donor may volunteer information about a specific instance of possible exposure to hepatitis viruses or to HIV. Suggested deferral periods for two such instances are provided below:

* Persons who have been victims of rape during the preceding 12 months should be deferred.

* Persons who have had contact with blood and body fluids through percutaneous inoculation (such as injury or accidental needlestick) or through contact with an open wound, non-intact skin, or mucous membrane during the preceding 12 months should be deferred.

---

[2]Sub-Saharan Africa includes all countries of Africa except Morocco, Mauritania, Algeria, Libya, Egypt, Tunisia, Sudan, Somalia and Western Sahara.

Donors should also be informed that:

* There is a time interval early in infection during which tests for HIV may be negative although an infection may still be transmitted .

* A sample of blood will be tested for antibodies to HIV and the donor will be notified if a test is positive (see I.C.l.c); individuals with positive tests will be permanently deferred from future blood or plasma donation.

* The names of people with repeatedly reactive tests for anti-HIV-l or anti-HIV-2 will become part of donor deferral registries (as required by 21 CFR 606 . 160 (e)].

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Q. You had said the subcutaneous injury before. Was that the right phrase?
A. It went into the tissue below the skin, yes.
Q. What about the other time that there was a sharp's injury?
A. I think it was a few months later she did the same thing.
Q. Anything else?
A. Not that I know of.
Q. Other than the needlesticks you just described, have you ever received any other type of sharp's injury while practicing dentistry?
A. Yes.
Q. Tell me about those.
A. I get sharp's injuries from explorers, knives, burs, sharp edges on partials, in particular, although occasionally a sharp edge on a denture, too. Amalgam saw.
MR. McCARTHY: I didn't hear that,
A . Amalgam saw. Sharp pieces of tooth and bone, matrix bands.
Q. I'm sorry, what?
A. Matrix bands. There's probably other things, but

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that's what comes to mind at the time.
Q. Approximately how many sharp's injuries of the type that you just described would you say you receive in a given year?
A. Probably several a week. Last week I had two in one day.
Q. And do these all occur while you are treating a

patient?
A. Those all can occur while I am treating a patient, yes, and those two last week that occurred on the same day occurred while treating a patient, different patients.
Q. And have you drawn blood in all of these injuries?
A. It's hard to quantify it. Most of them, yes.
Q. Have you taken any steps to reduce either the number of needlesticks that you have had occur or the number of sharp's injuries that have occurred?
A. Yes.
Q. What steps are those?
A. To try to pass the instruments so that the -- well, I try harder to protect my assistant and the patient than I do myself, because you can't achieve an optimum for everybody, so in consideration of that, I try to protect the patient and my assistant the most.

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Q. Have you taken any steps to reduce the number of needlesticks or sharp's injuries that you have received?
A. Yes
Q. And what are those steps?
A. One is that we, in as far as possible, don't handle the syringe until the patient is ready for the injection, try not to startle them, try not to inject when they don't seem like they might necessarily be cooperative. We -- the biggest single thing, and I think the reason that I do have a good record with this is that we stop everything when we are handling a syringe, nothing else is done, and nothing else is done until the needle is capped and the syringe laid down.
Q. How do you cap your needles?
A. One hand scoot.
Q. The sharp's injuries that you were mentioning just before from the explorers, the knives, the burs, the

amalgam saw and the like, do those mostly occur from -- while passing instruments or while you are working on the patient?

A. Mostly while working on the patient.

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Q. Dr. Bragdon, in your expert report at page two you indicate that in a hospital -- that you would treat an HIV positive patient in a hospital operatory with air filtration, is that correct?

A. Yes.

Q. And is the reason that you would need air filtration because of what you believe to be the potential transmission of HIV through aerosols?

A. Also HIV patients are at risk for other diseases such as TB.

DONALD MARIANOS, DDS 8-10-95

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(10) Q: What is a handpiece?
(11) A: A handpiece is the dental instrument that (12) is used to, in lay terms, drill the tooth. It holds (13) the dental bur.
(14) Q When the bur is being utilized, is there (15) some splatter from the patient --
(16) A Yes.
(17) Q -- that can reach the dental health care (18) worker?
(19) A Yes.
(20) Q Does that splatter include blood?
(21) A it can, yes.
(22) Q It's not unusual; is it?
(23) A It's not unusual.

* * *

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(5)Q Do you agree that the dental office staff (6) works in an environment where there is a frequent (7) spatter of blood and a blood-tinged saliva?
(8)A Yes.

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MANAGEMENT OF INFECTION IN HIV DISEASE
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From the HIV Infections Branch, Hospital Infections Program, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia

INFECTIOUS DISEASE CLINICS OF NORTH AMERICA VOLUME 8. NUMBER 2. JUNE 1994

HIV TRANSMISSION IN THE HEALTH-CARE SETTING

Risks to Health-Care Workers and Patients

Laurie M. Robert, MS, and David M. Bell, MD

Evaluating the risk of HIV transmission in the health-care setting requires data from various sources, including surveillance activities that attempt to ascertain cases of HIV transmission to health-care workers (HCWs) and patients, seroprevalence studies among HCW's and patients, and prospective studies that evaluate a HCW's risk of seroconverting following an exposure to HIV-infected blood and that attempt to define the frequency and preventability of blood contacts in health-care settings.

TRANSMISSION FROM PATIENT TO HEALTH-CARE WORKER

Surveillance Data

Information on employment in a health-care setting is collected on AIDS case reports that are sent by state or local health departments to the Centers for Disease Control and Prevention (CDC). As of March 31, 1993, this information was available for 214,686 adults with AIDS; 10,122 (4.7%) had been employed in a health-care setting. In comparison, approximately 5.7% of the United

states labor force is employed in health services.[7] Of the HCWs with AIDS, 94% reported nonoccupational risks for acquiring HIV. The remaining 6% are reported as having an undetermined risk; most of these are still under investigation to determine the mode of transmission (C. Ciesielski, personal communication, 1993). HCWs who do not have another risk identified after follow-up investigation and who state they had previous occupational exposure to blood or body fluids are classified as cases of possible occupational transmission.

As of June 30, 1993, a total of 115 US workers have been reported to a national surveillance system for occupational transmission of HIV (Table 1). Thirty-seven workers had documented seroconversion associated with a documented exposure to HIV. Most of the exposures were to HIV-infected blood, one to visibly bloody fluid, one to an unspecified fluid, and one to concentrated virus in a laboratory. Thirty-two of the 37 workers had percutaneous exposures, four had mucocutaneous, and one had both percutaneous and mucocutaneous exposures. Eight of these HCWs have developed AIDS. Another 78 HCWs have been reported as possible cases of occupational acquisition of HIV. These workers did not report non-occupational risks for HIV and have reported occupational exposures to blood, body fluids, or laboratory solutions containing HIV; however, seroconversion was not documented, usually because no baseline sera were available to establish seronegativity at the time of exposure.[8]

This passive surveillance system for occupational transmission most likely does not reflect the full extent of occupational transmission; such cases can be difficult to document, particularly if exposures are not reported at the time of occurrence. In the past, it has been estimated that only 10% to 60% of percutaneous injuries are reported.[28,36]

HIV Seroprevalence Among Health-Care Workers

HIV seroprevalence surveys provide a means of indirectly assessing HCWs' risk of HIV infection (Table 2). CDC has sponsored two voluntary anonymous seroprevalence surveys of surgeons. In 1992, a serosurvey was performed among surgeons in three specialties practicing in moderate to high AIDS incidence areas.

Table 1. US HEALTH-CARE WORKERS WITH DOCUMENTED AND POSSIBLE OCCUPATIONALLY ACQUIRED HIV INFECTION, REPORTED THROUGH JUNE 1993

Occupation	No. of Cases of Documented Occupational Transmission	No. of Cases Possible Occupational Transmission
Dental worker, including dentist	-	7
Embalmer/morgue technician	-	3
Emergency medical technician/paramedic	-	7
Health aide/attendant	1	8
Housekeeper/Maintanence Worker	1	6
Laboratory Technician, Clinical	14	13
Laboratory Technician, Nonclinical	1	1
Nurse	13	15
Physician, nonsurgical	4	8
Physician, surgical	-	2
Respiratory therapist	1	2
Technician, dialysis	1	1
Technician, surgical	1	1

Technician/therapist, other than those listed above	-	3
Other health-care occupations	-	2
Total	37	78

Health-care workers are defined as those persons, including students and trainees, who have worked in a health-care, clinical, or HIV laboratory setting at any time since 1978. (From Centers for Disease Control HIV/AIDS Surveillance Report, July 1993.)

Table 2. PUBLISHED HIV SEROPREVALENCE IN SELECTED HEALTHCARE WORKERS

Occupation Author	No. Tested	No. Positive	Percent Prevalence*
Surgeons			
Panillo et al[40]	770	1	0.14
Tokars et al[52]	3420	2	0
Physicians and dentists (US Army Reserve)			
Cowan et al[16]	3347	3	n/a
Dentists			
Gerberding et al[22]	304t	0	0
Flynn et al[20]	89	0	0
Klein et al[34]	1132t	1	0.9
Siew et al[50]	1195	0	0.9
Gruninger et al[26]	1165	1	0.9

Gruninger et al[26]	1480	0	0
Ebbesen et al[19]	961	0	0
Dental hygienists			
Flynn et al[20] Klein et al[34]	167	0	0
Dental assistants			
Flynn et al[20] Klein et al[34]	176	0	0
Hemodialysis staff			
Assogba et al[3] Chirgwin et al[12]; Comodo et al[15]; Goldman et al[23]; Peterman et al[43]	356	0	0
Health-care worker blood donors			
Chamberland et al[10]	9449	3	tt

*Including seropositives with nonoccupational risk.
†Persons with community risk excluded
††One HCW lost to follow up

Among the 770 participants, one surgeon, did not report nonoccupational risks for HIV infection on an anonymous questionnaire, was HIV seropositive. This surgeon practiced general surgery for over 25 years and reported three percutaneous injuries involving patients with HIV infection or AIDS since 1978.[40] At the annual meeting of the American Academy of Orthopedic Surgeons in 1991, two of 3420 surgeons who participated in the survey were HIV seropositive; both reported nonoccupational risk factors.[52]

In a testing program conducted among physicians,

surgeons, and dentists in the US Army Reserve, who normally spend 90% of their time in civilian life, the HIV seroprevalence was 0 of 263 among men and 3 of 3084 among men. No other information regarding possible risk factors was reported for these seropositive men.[16]

No seropositives were found among 356 hemodialysis staff in five cities.[3 12 15 23 43] Three (0.03%) of 9449 HCW blood donors evaluated in six urban regions between March 1990 and May 1991 were HIV seropositive; two reported nonoccupational risk factors for HIV, and one was lost to follow-up.[10] Studies of dentists, dental hygienists, and dental chairside assistants have found low rates of infection among persons not reporting behavioral or transfusion risks (Table 2).[19 20 22 26 34 50]

A major limitation of HIV seroprevalence studies in HCWs to date is that the extent of occupational or nonoccupational exposure of most workers tested is not known. Also, some of these rates may be underestimates if workers who knew or suspected that they might be positive declined to be tested.

* * *

Table 16. Health care workers with documented and possible occupationally acquired AIDS/HIV infection, by occupation, reported through December 1996, United States[1]

Occupation	Documented Occupational Transmission[2]	Possible Occupational Transmission[3]
Dental worker, including dentist	-	7
Embalmer/morgue technician	-	3
Emergency medical technician/paramedic	-	10
Health aide/attendant	1	12
Housekeeper/Maintanence Worker	1	7
Laboratory Technician, Clinical	16	16
Laboratory Technician, Nonclinical	3	-
Nurse	21	28
Physician, nonsurgical	6	11
Physician, surgical	-	6
Respiratory therapist	1	2
Technician, dialysis	1	2
Technician, surgical	2	1

Technician/therapist, other than those listed above	-	5
Other health-care occupations	-	1
Total	52	111

[1]Health care workers are defined as those persons including students and trainees, who have worked In a health care, clinical, or HIV laboratory setting at any time since 1978. See *MMWR* 1992;41:823-25.

[2]Health care workers who had documented HIV seroconversion after occupational exposure or had other laboratory evidence of occupational infection: 45 had percutaneous exposure, 5 had mucocutaneous exposure, 1 had both percutaneous and mucocutaneous exposures, and 1 had an unknown route of exposure. Forty-seven exposures were to blood from an HIV-infected person, 1 to visibly bloody fluid, 1 to an unspecified fluid, and 3 to concentrated virus in a laboratory. Twenty-four of these health care workers developed AIDS.

[3]These health care workers have been investigated and are without identifiable behavioral or tranfusion risks; each reported percutaneous or mucocutaneous occupational exposures to blood or body fluids, or laboratory solutions containing HIV, but HIV seroconversion specifically resulting from an occupational exposure was not documented.

(Annals of Internal Medicine 1992; 116: 798-805)

Transmission of Human Immunodeficiency Virus in a Dental Practice

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- *Objective:* To determine if patients of a dentist with the acquired immunodeficiency syndrome (AIDS) became infected with human immunodeficiency virus (HIV) during their dental care and, if so, to identify possible mechanisms of transmission.
- *Design:* Retrospective epidemiologic follow-up of the dentist, his office practice, and his former patients.
- *Setting:* The practice of a dentist with AIDS in Florida.
- *Participants:* A dentist with AIDS, his health care providers and employees, and former patients of the dentist, including eight HIV-infected patients.
- *Measurements:* Identification of risks for HIV trans-mission (if present), degree of genetic relatedness of the viruses, and identification of infection control and other office practices.
- *Results:* Five of the eight HIV-infected patients had no confirmed exposures to HIV other than the dental practice and were infected with HIV strains that were closely related to those of the dentist. Each of the five had invasive dental procedures, done by the dentist after he

was diagnosed with AIDS. Four of these five patients shared visit days *(P*> 0.2). Breaches in infection control and other dental office practices to explain these transmissions could not be identified.

- *Conclusion:* Although the specific incident that resulted in HIV transmission to these patients remains uncertain, the epidemiologic evidence supports direct dentist-to-patient transmission rather than a patient-topatient route.

In July 1990, the Centers for Disease Control (CD(.) published the first of a series of reports describing human immunodeficiency virus (HIV) transmission from a health care worker to a patient (1-3). No case of such transmission had been previously reported, although transmission of another blood-borne pathogen, hepatitis B virus (HBV), from infected health care workers to patients has been well documented, and the theoretic possibility that HIV transmission could also Occur had been previously acknowledged (4-6). These reports intensified the ongoing debate concerning whether HIV and HBV-infected health care workers should do invasive medical and dental procedures. Resolution of this question has been hampered by the lack of accurate quantitation of the risk for transmission and also by misinformation and misconceptions regarding the likely mechanism of HIV transmission in the dental practice.

We review updated epidemiologic findings which led to the conclusion that five patients of a dentist with the acquired immunodeficiency syndrome (AIDS) were infected with HIV during their dental care. We also discuss the possible mechanisms of disease transmission.

Methods

The investigation began when a young woman without identified risk factors for HIV infection (Patient A) was reported to have AIDS. During a routine health department follow-up interview, Patient A provided the name of her dentist who, 2 years previously, had extracted her maxillary third molars. She was aware that the dentist had become ill and suspected that he might have AIDS. The dentist was known to the Florida Department of Health and Rehabilitative Services investigator as a previously reported AIDS case.

After publication of a report describing the possible HIV transmission to Patient A, the dentist publicly requested that his former patients seek HIV testing. The dentist was no longer in practice, and he could not provide a complete list of his former patients. However, a partial list was compiled from names provided by insura nce companies, Medicaid records, billing and other records from the practice, and from other dental offices in the area. Patients who had not been tested for HIV at the local county public health unit were notified by the Florida Department of Health and Rehabilitative Services. By the end of 1991. 2 of the approximately I 100 former patients tested were found to be HIV-seropositive (Patients B and C).

A fourth patient (Patient D) was identified by confidentially matching the names of the former patients to the state's reported AIDS cases. Three former patients (Patients E, G, and H) notified the Ct)(. that they were infected with HIV An-other patient (Patient F) was identified during the epidemeio-logic investigation of Patient E. which occurred between November 1987 and June 1989, included one examination, two prophylaxes, two cosmetic bondings, and one visit for extraction of her

maxillary third molars (Table 2). The patient recalled that the dentist wore gloves and a mask during the procedures. Dental x-rays taken during the spring of 1990 showed no additional extractions.

Medical records indicated that 4 weeks after the dental extraction, she was evaluated for a sore throat. She was afebrile, and her ulcerated tonsils and anterior cervical lymph nodes were moderately enlarged. The diagnosis was pharyngitis and aphthous ulcers; no indication exists that an acute retroviral syndrome was considered. She was diagnosed with oral candidiasis in May 1989 (17 months after the extraction) and with AIDS in December 1989 (24 months after the extraction), when she developed *Pneumocystis carinii* pneumonia. At that time, she was first tested for HIV antibody and was found to be seropositive.

Patient B reported that her only sex partner since 1978 was her husband, who tested seronegative for HIV. She denied injecting drugs.

Her 21 dental visits, between December 1987 and July 1989, included four extractions *(see* Table 2). Other procedures included three prophylaxes, three periodontal scalings, one examination, two restorative fillings, and ten fixed and removable prosthodontics. She recalled that the dentist wore gloves and a mask. She also recalled cutting her tongue on a tooth that was "sharply filed" during preparation for a bridge; however, she was unaware of any injury that the dentist may have sustained at that time.

Patient C denied having sex with men and injecting drugs. He reported multiple heterosexual partners but could name only 14 former female sex partners since 1978, and he was unaware that any were infected with HIV. Nine of these former partners were located and were found to be HIV seronegative The

possibility that Patient C had engaged in high-risk behaviors was raised during interviews and record reviews; however, behavioral exposures to HIV could not be documented.

He made 14 visits to the dental office between December 1984 and May 1989; the procedures included two extractions, two examinations, six restorative fillings, four prophylaxes, one periodontal scaling and one cosmetic bonding (see Table 2). Nine of these visits, including both of the extractions, occurred in 1984 and 1985, before the dentist began to wear gloves routinely (Figure 1). The patient did recall that the dentist wore gloves and a mask during his visits in 1988 and 1989.

Patient D, a man who had behavioral risks for HIV infection, was diagnosed with AIDS in 1989. He had 18 visits to the dental office between June 1985 and May 1989. The procedures included five examinations, five extractions, six prophylaxes, two periodontal scalings, four removable prosthodontics, and two restorative fillings.

Patient E denied injecting drugs. Of her ten known sex partners since 1978, two had died from non-HIV-related causes and were not known to be at risk for HIV infection. Each of the remaining eight was tested for HIV antibody; one was seropositive. This man (Pa-tient F) had other risk factors for HIV infection and was also a patient of the dentist. Patient E reported infrequent sexual contact with Patient F, the last contact occurring in the fall of 1988. Because of her concern about Patient F's high-risk behavior, she was first tested for HIV antibody in October 1988. Patient E was seropositive, whereas Patient F was seronega-tive

Billing records and receipts indicated that Patient E made 14 visits to the dentist between June 1988 and December 1988 *(see* Table 2). The procedures included

four examinations and radiographs, two prophylaxes, two root canal therapies, one restorative filling, six fixed prosthodontics, and one fluoride treatment. She reported that the dentist wore gloves and a mask during her visits.

Patient F tested negative for HIV antibody in October and December 1988, but he tested positive during the epidemiologic follow-up investigation in December 1990.

In September 1989, his medical records indicate a 1-week history of sore throat, loose stools, and headache; other symptoms included decreased appetite, fatigue, myalgia, and an earache. He had a temperature of 38.1 *C and tender anterior cervical adenopathy; his leukocyte count was 3300/[u]L, and he had a lymphocyte count of 693/[u]L. A diagnosis of tonsillitis was made, and a throat culture yielded "normal respiratory flora." No HIV-antibody test was done at that time, nor does any indication exist that an acute retroviral syndrome was considered. This illness occurred approximately 1 year after Patient F's last reported dental appointment (August 1988) and his last sexual contact with Patient E (Autumn 1988) and 9 months after his last negative HIV antibody test (December 1988).

Review of Patient F 's medical and other records established a history of behavioral risk factors for HIV infection. Only one dental visit was documented by billing records, although he reported five or six visits during July and August 1988 for examination, radio-graphs, prophylaxis,extraction, restorative fillings, and root canal therapy.

Patient G denied, since 1978, sex with men and injecting drugs. He first tested positive for HIV during screening for plasma donation in November 1990. He had been HIV seronegative when he donated blood in 1986, and his two reported female sex partners since 1986 were

HIV seronegative

Patient G's dental records could not be located, but records from an alcohol rehabilitation facility documented two visits in July 1988 for root canal therapy and a restorative filling *(see* Table 2). He could not recall whether the dentist wore gloves or a mask.

Patient H has acknowledged behavioral risks for HIV infection. He made three visits to the dentist between September 1985 and July 1986 for prophylaxes, examination, and gingivectomy.

With the exception of patients E and F, none of these patients named each other as a sex partner, and all denied sexual contact with the dentist. For all of the patients, local anesthesia _was the only anesthetic administered, and none could recall an injury to the dentist that would have exposed them to his blood (for example, a needlestick or a cut with a sharp instrument).

Laboratory Findings on Patients

The nucleotide sequences of the C2-V3 domain of the viruses from Patients A, B, C, E, and G were closely related to those of the dentist's virus. The average nucleotide variation ranged from 3.4% to 4.9% (50), a range similar to those previously observed for HIV strains from persons whose infections were known to be epidemiologically linked (7-9). In contrast, the viruses from Patients D, F, and H, each of whom had high-risk behaviors, were not closely related to the dentist's virus, and differed by 13.6% and 10.7% for Patients D and F, respectively (50). This degree of genetic difference has been found among strains of HIV that were epide-miologically unrelated. Preliminary analysis indicates that the virus from Patient H is also not closely

related to that of the dentist. No instance of comparable viral sequence relatedness was identified among the viruses from the 35 local controls (50). The HIV strains from patients A, B, C, E, and G were significantly closer in their DNA sequences to the dentist's virus than control patients *(P* = 6 x 10-[6], Wilcoxon rank-sum test) (50).

An unusual pattern or signature of eight noncontiguous amino acids encoded by V3 nucleotides was found in the dentist's virus. The viruses from Patients A, B, C, E, and G, had at least 7 of the 8 signature amino acids. This degree of agreement was not found in the viruses from the dental patients with behavioral risks for HIV infection, the local controls, or a reference set of sequences from 32 HIV-l strains *(P* = 8 x 10-[6], Wilcoxon rank-sum test) (50). This finding, together with the genetic distance analysis, suggests that the virus from the dentist and those from Patients A, B, C, E, and G formed a clusterof genetically similar strains that were distinct from the viruses of the patients with identified risks for HIV infection and from the viruses of 35 local control patients.

Interview with the Dentist

The dentist recalled having sustained needlestick injuries from anesthetic needles before he was diagnosed with HIV infection, but did not recall sustaining any percutaneous injuries after learning he was HIV positive.

The dentist reported nonoccupational exposures to HIV, and he believed that he had been infected through these exposures, although the exact time of infection remains unknown. He was unaware that any of his patients were infected with HIV, although he suspected that as many as ten patients may have been at risk for

HIV infection. He denied sexual contact with any of his patients.

Medical History of the Dentist

Review of the dentist's medical records showed that he was diagnosed with symptomatic HIV infection in late 1986 and with AIDS in September 1987, as indicated by a biopsy result diagnostic of Kaposi sarcoma of the palate and a CD4 + lymphocyte count of 190/[u]L. Zidovudine therapy was begun in early November 1987 but was discontinued from 16 December through 23 December 1987 because of neutropenia *(see* Figure 1). It was then continued at different doses throughout the time he remained in clinical practice.

In May 1988, examination of the palate showed purplish discoloration of the mucosa of the entire hard palate without ulceration or exophytic growth. The remainder of his physical examination was unremarkable. From 6 June through 20 June 1988, he received a total of 2750 rads of radiation therapy to his palate. This treatment resulted in mucositis at the end of therapy. By 6 July 1988, the palatal lesions had regressed, and the mucositis reaction had subsided. According to his medical records and interviews with his health care providers, he remained relatively asymptomatic except for fatigue until March 1989, when several lesions indicative of Kaposi sarcoma were noted on his abdomen and thorax. In June 1989, he was hospitalized with a presumptive diagnosis of P. carinii pneumonia. According to medical records, in the summer of 1989 his cutaneous Kaposi sarcoma lesions were treated with liquid nitrogen, and he reported that he used an electrocautery unit kept at his home to self-cauterize some of the lesions. In the

summer of 1989, he stopped practicing dentistry. During the time he was in practice, his medical records did not indicate thrombocytopenia or any other bleeding disorder, hand dermatitis, injury, or dementia. No indication of peripheral neuropathy was present, although no record of a detailed neurologic examination or testing for neurologic dysfunction was found in the medical records.

In October 1989, the Kaposi sarcoma progressed to involve his lungs, and he was treated with alpha-interferon and chemotherapy. He died in September 1990.

The Dental Practice

The dentist had a general practice at one location from 1981 to 1989. He was in solo practice except from September 1985 through February 1986, when he had an associate. In the summer of 1989, the office was sold to another dentist. The patient records were dispersed and many office records, such as appointment books, were discarded. The office was remodeled, and most of the dental equipment was replaced. The office staff stated that there had been no electrocautery unit in his office practice.

All 16 persons identified as having been employed in the dental practice, including receptionists, hygienists, and assistants, were located and interviewed. All tested seronegative for HIV antibody. Staff members were not aware of any patients who were known to be infected with HIV or of any who had been sex partners of the dentist.

Staff members reported that since 1987, the dentist had received one prophylactic treatment from the hygienist and on one or two occasions had had an

unspecified liquid medication placed on a palatal lesion using a cotton-tipped applicator that was then discarded. To the knowledge of staff members, the dentist received no other treatment and did not perform any treatment on himself in his office.

Infection Control Practices

Barrier precautions were fully introduced into the practice by early 1987; all staff with patient contact wore latex gloves and surgical masks for patient-care activities when appropriate. On most occasions, gloves were changed and hands were washed between patient contacts. Occasionally, however, gloves were washed rather than changed. Masks reportedly were changed infrequently. No staff member reported noticing any dermatitis or other lesions visible on the dentist or witnessing the dentist sustain a percutaneous injury during patient treatment.

By 1987, all surgical instruments used in the practice were autoclaved; other heat-tolerant instruments were autoclaved when time and instrument supply allowed or were immersed in a 2% glutaraldehyde solution for varying periods, usually of at least 20 minutes duration. Dental equipment such as prophylaxis angles and air and water syringe tips were either wiped with alcohol or immersed in 2% glutaraldehyde after each patient encounter. Some disposable items, such as saliva ejectors, high-speed evacuation tubes, and prophylaxis cups, were occasionally reused after being immersed in 2% glutaraldehyde, usually for at least 20 minutes. Hand-pieces were wiped with alcohol after each patient encounter; water lines were not flushed between patients.

The dental practice had no written infection control protocol or consistent pattern for operatory

cleanup and instrument reprocessing. No office protocol existed for reporting or recording injuries such as needlesticks or other percutaneous injuries involving sharp instruments or devices.

Only local anesthetic was used in this practice, and anesthetic needles were either recapped by the dentist using a two-handed technique or remained uncapped and were recapped by the assistant on completion of the dental procedure. By 1983, only single-use disposable anesthetic carpules and disposable needles were used. Staff members reported no instance in which a needle or carpule was reused on different patients; however, the same needle was routinely used multiple times on the same patient when multiple injections of local anesthetic were required. The dentist did not document his use of local anesthetic in patient records.

Days of Shared Visits

On four occasions, two of the five infected patients whose viruses were related to that of the dentist were seen in the dental office on the same day *(see* Table 2, Figure 1). Those with shared visit days included Patients A, B, C, and E; Patient G did not share any visit days with the other four patients.

The five patients made a total of 48 visits to the dental office from November 1987 until the close of practice in July 1989. To examine the likelihood that the five patients shared visit days, conditional probabilities were calculated based on the number of visits made by each patient between November 1987 and July 1989, the interval during which at least two of these five HIV. infected persons were patients of the dentist. The probabilities were calculated assuming that visits

occurred during days on which the dentist's office was open, without allowing multiple visits for the same patient on the same day. These shared-visit days probably occurred by chance alone ($P > 0.2$). Because appointment books no longer existed, neither the order nor the time of day could be determined for any of the shared-visit days.

Patients A and B were seen on 17 December 1987 *(see* Table 2). Patient A had two extractions while receiving local anesthetic. Patient B was examined for a toothache, and a radiograph was taken; no invasive procedures were done, although she had an extraction 4 days later. No indication exists that a handpiece was used on either of these patients on this day.

On 11 July 1988, Patient B had periodontal scaling and an extraction. Patient E had a crown placed on a maxillary bicuspid tooth. Patient B received local anesthetic, but we could not determine whether an anesthetic was used for placement of Patient E's crown because the tooth had previously had a completed root canal. It is unlikely that instruments used for the periodontal scaling and extraction would also be used to place a crown.

On 29 August 1988, Patient B had a bridge placed, and Patient E had plastic restorations placed on two maxillary anterior teeth. Although it is probable that local anesthetic was used on both patients on this day, the other instrumentation would differ. We could not determine whether the dental handpiece was used during the placement of the bridge; however, it would have been used for the restorations on patient E.

On 20 January 1989, Patients B and C had prophylaxes. Patient B's prophylaxis was done by thedental hygienist; however, we could not determine whether Patient C's prophylaxis was performed by the dentist or by the hygienist. It is unlikely that either

patient had local anesthetic administered on that day.

Discussion

The findings of this investigation led us to conclude that five patients of a dentist with AIDS became infected with HIV during their dental care. We support this conclusion because the five patients had no other confirmed exposures to HIV; all had invasive procedures done by the dentist; and DNA sequence analyses of the HIV strains from these five patients indicate a high degree of similarity among the strains and that which infected the dentist. These HIV strains were distinct from those infecting the three patients in the practice who had identified risk factors for HIV infection and from 35 HIV-infected persons residing in the same geographic area.

Our investigation is the first to report the transmission of HIV to patients during receipt of health care, although HIV transmission from infected patients to health care workers is well documented (10-12). In addition, transmission of HBV, another blood-borne virus, from infected health care workers to patients has been reported repeatedly since the early 1970s. More than 330 cases of HBV transmission from health care workers to patients occurring during invasive procedures have been reported (13-32) (Shapiro CN, CDC, unpublished data). Virtually all cases have involved clusters associated with care by 33 HBV-infected health care workers, including 9 dentists and 20 surgeons. Although percutaneous transfer of blood was the most likely mechanism of HBV transmission from health care worker to patient, the specific incident which resulted in transmission was not identified in any of the 33 episodes

investigated.

In none of these studies involving an HBV-infected surgeon or dentist was patient-to-patient transmission of HBV believed to have been a mechanism of transmission. However, in other health care settings, patient-to-patient transmission of HBV has been attributed to contaminated common-source vehicles, including jet guns, multidose vials of heparin and local anesthetic, and fingerstick devices (33-36).

Although the precise circumstances or mechanism of HIV transmission in this Florida dental office remains unclear, the preponderance of data support direct dentist-to-patient transmission rather than a patient-to-patient route. The dentist continued to do many invasive procedures after he was diagnosed with AIDS. This period includes the interval during which his zidovudine was discontinued and during which a course of radiation therapy was administered. All five patients had invasive procedures done after the dentist was diagnosed with AIDS and had evidence of severe immunosuppression. Low CD4 + lymphocyte counts are associated with higher viral titers in the blood (37) and therefore could be associated with an increased likelihood of transmission if an injury to the dentist occurred. In addition, interviews with the dentist's health care providers and his office staff indicated that, after he was diagnosed with AIDS, he frequently experienced fatigue, a factor which may have increased the likelihood of injury.

There were multiple opportunities for the dentist to have injured himself during invasive procedures done on these patients, especially during periods of fatigue and ill health. In a survey of self-reported sharps injuries in 89 dentists, 32% reported 2 or more per month, and 3% indicated more than 15 such injuries per month (38).

Another survey of 1132 dentists found a median of one sharps injury per month (39). Further, although undocumented, the possibility that the dentist had a peripheral neuropathy cannot be ruled out; peripheral nervous system dysfunction has been noted in 9% to 35% of patients with AIDS (40-43).

All five patients received multiple injections of local anesthetic, and a sharps injury during anesthetic administration could have resulted in contamination of the syringe apparatus with the dentist's blood, after which additional anesthetic may have been injected into the same patient. A sharps injury could also result in direct contact of the dentist's blood with the patient's inflamed or nonintact oral tissues during the invasive procedures. Although the dentist began to routinely wear gloves in 1987, gloves do not prevent most injuries caused by sharp instruments.

Human immunodeficiency virus does not remain viable for extended periods outside the body, and it is susceptible to commonly used germicides, including those used in the practice (4). Interviews of staff members indicate that, before use on patients, all instruments were cleaned and reprocessedby methods known to inactivate HIV, although these methods may not comply with recommendations designed to kill more resistant organisms.

If contaminated instruments or equipment are assumed to be the principal factor in these transmissions, one would expect to see a clustering of patient appointments. Although some shared-visit days were documented, these probably occurred by chance alone. Additionally, the procedures done on these shared visit days probably did not involve the use of the same instruments on more than one of the infected patients. Questions have been raised about the possible role of the

dental handpiece in these transmissions. It is unlikely that a high-speed dental handpiece was used on both patients on any of the shared-visit days, and, to date, no studies have confirmed the transmission of blood-borne viruses such as HIV or HBV through the dental handpiece or other dental equipment.

The dentist denied having sex with any of his patients. One HIV-infected person subsequently contacted the CDC and reported having had sex with the dentist in the early 1980s and occasionally receiving dental care from this dentist before moving from the area in 1985. However, no patient records exist to confirm these data. No other persons who were both sex partners and patients of the dentist have been identified.

The possibility that these infections were intentionally transmitted has been hypothesized. Interviews with family, staff, health care providers, patients, and others who knew the dentist have not provided any support for this hypothesis. The dentist initially cooperated with our investigation and provided a blood specimen for genetic sequencing to be compared with patients' specimens. Additionally, most of the procedures done by the dentist were routinely observed by staff, all patients were awake during the procedures, and no unusual behavior was noted or suspected by either patients or staff members.

Some have hypothesized that the dentist might have had an exceptionally high titer of virus or an easily transmittable strain of HIV. The titer of HIV in the dentist's blood obtained in March 1990 is currently being determined, although it is unclear how accurately this result would reflect the viral titer in his blood between 1987 and 1989. Strain-specific virulence factors for HIV transmission have not been identified; further, no evidence was found to suggest HIV transmission from

these patients to their sex partners.

The five patients identified in our investigation remain the only reported cases of HIV transmission from an infected health care worker to patients during invasive procedures. Results from six other studies of patients exposed to HIV-infected surgeons or dentists have not shown transmission (44-49). Of the 1246 patients of these health care workers who are known to have been tested, one was positive for HIV infection; however, this patient had behavioral risks for HIV infection and was probably infected before his surgical procedure (48).

The risk for transmission of blood-borne infections, including HBV and HIV, from an infected health care worker to a susceptible patient during an invasive dental or surgical procedure may depend on several factors, including the type of procedure, the infection control precautions, and the individual technique of the health care worker. The relative importance of these and perhaps other factors in predicting the risk for such transmission is poorly understood and requires further study.

Currently available information indicates that when health care workers adhere to recommended infection control procedures, the risk for transmitting HBV from an infected health care worker to patients is small, and the risk for transmitting HIV is probably even smaller. These small risks should not deter patients from seeking necessary surgical or dental care.

Table 1. Characteristics of the Dentist and the HIV-infected Patients Identified in the Dental Practice*

Patient	Identified Risk Factor for HIV	CD4 +/	MHA-TP FTS-ABS	HBsAg	Anti-HB_c
A	No	< 50	Negative	Negative	Negative
B	No	222	Negative	Not Done	Negative
C	Unconfirmed	< 50	Negative	Not Done	Negative
D	Yes	Not done	Negative	Negative	Positive
E	No	567	Negative	Negative	Negative
F	Yes	253	Negative	Negative	Negative
G	No	400	Negative	Negative	Negative
H	Yes	640	Negative	Positive	Positive
Dentist	Yes	190	Negative	Negative	Positive

*CD4+ = CD4 lymphocytes; FTA-ABS = fluorescent *Treponema pallidum* antibody absorption; HBsAg = hepatitis B surface antigen; anti-HBc = antibody to hepatitis B core antigen; MHA-TP = microhemagglutination assay for antibodies to *Treponema pallidum*.
[t] At initiation of epidemiologic investigation. [tt] At time of AIDS diagnosis.

Table 2. Dental Appointment Dates for Patients A,B,C,E, and G*

Year	Jan	Feb	March	April	May	June	July	Aug	Sept.	Oct.	Nov.	Dec.
1987/											A(16)	A&B(17)t B(21)
1988/					B(12)	E(18,23,30)	B&E(11) E(5,28) G(18,25)	B(1,4,8,16,16,18) B&E (29)t	B(1,8,23, 26) B(20) E(2,9,19)	B(20)	B(8) E(3,7,10)	A(23,29,30) C(6) E(8)
1988/	B&C (20)t	C(10,16)		B(10)	C(19)	A(29)	Practice Closed					

*Letters indicate patients; numbers in parentheses indicate day of the month
tShared-visit days.

(May 7, 1993 Vol. 42 / No. 17 MMWR 329)
Update: Investigations of Persons Treated
by HIV-Infected Health-Care Workers -United States

Previous reports have described transmission of human immunodeficiency virus (HIV) to five persons (patients A, B, C, E, and G) during receipt of care from an HIV-infected dentist in Florida (1-3) and other investigations of patients who were treated by HIV-infected health-care workers (HCWs) (4). This report updates these investigations and presents evidence that a sixth patient (patient I) became infected with HIV while receiving care at the Florida dental practice, the only practice in which HIV transmission from an infected HCW to patients has been documented.

* * *

Epidemiologic and Laboratory Investigation of Patient I

* * *

Interviews with the patient and her parents indicated that she was a patient in the dental office during the summers of 1987, 1988, 1989 for examinations, radiographs, prophylaxes, and restorative fillings under local anesthesia. . . . Bitewing radiographs taken in 1990 by another dentist indicate that single surface restorative fillings had been placed in three permanent molars. Before 1987, the patient had received no other dental care since the eruption of her permanent teeth.

* * *

Editorial Note: The results of the epidemiologic

and laboratory investigation of patient I indicate that she became infected with HIV while receiving care from an HIV-infected dentist. She had had no other confirmed exposures to HIV. In addition, DNA sequence analysis showed her HIV strain had a high degree of similarity to that of the dentist and the five other infected patients. The precise event(s) resulting in HIV transmission in this practice remain(s) unknown (1). Unlike the other five infected patients, patient I had neither dental extractions nor root canal therapy. Opportunities for injuries to the dentist were limited. However, exposure of patient I to the dentist's blood cannot be ruled out (e.g., related to use of the anesthetic syringe).

Approximately 1100 patients of the dentist are known to have been tested for HIV. In late 1990, HRS used available records to compile a partial list of the patients in the dental practice and notified those patients who had not been tested. Former patients who have not yet been tested should contact their local health department or private physician to discuss HIV testing.

Among the 58 investigated practices described in this report, the dental practice in Florida remains the only documented instance of HIV transmission from an HCW to patients. The risk for transmission of a bloodborne pathogen from an HCW to a patient is associated with the circulating titer of the pathogen in blood, the procedures performed, techniques and infection-control precautions used, and the medical condition ofthe HCW(9).

The results presented in this report are consistent with previous assessments that the risk for HIV transmission from an infected HCW to patients during invasive procedures is small and can be reduced with appropriate use of infection-control precautions (9,10).

(JADA, Vol. 124, October 1993)

HIV, HEALTH CARE WORKERS AND PATIENTS: HOW TO ENSURE SAFETY IN THE DENTAL OFFICE

JOHN A. MOLINARI, PH.D.

The professional relationship between many dental and medical health care providers and their patients has been modified substantially during the last 10 to 12 years.

Infectious diseases and irifection control have dramatically affected this change. The basic reasons did not involve well-known pathogens such as hepatitis B virus or herpes simplex virus, both documented as significant occupational risks for health care workers and, to a lesser extent, for patients exposed to infected health care workers[1-7]

Despite numerous reports on these and other infectious disease risks, the major catalyst for the change was the discovery and publication of a new form of life-threatening immune deficiency condition for which we did not (and still do not) have a cure--AIDS.[8,9] The door to widespread concern was opened further when what is now termed human immunodeficiency virus was isolated a few years later. [10-12]

Because of their bloodborne transmission potential, many organizations used both HBV and HIV as prototypical target microorganisms in developing infection control guidelines and regulations. These organizations included the Centers for Disease Control and Prevention,[13-16] the American Dental Association[17,18] and the Occupational Safety and Health Administration.[19]

What can be done to preserve the high standards of patient care, give reasonable assurances to patients and acknowledge the rights of health care workers?

Conscientious adherence to infection control is the most responsible option available.

HCW RISKS FROM HIV-INFECTED PATIENTS

Publication of detailed scientific information characterizing the structure, genetics and chemical susceptibility of HIV, its transmission, progression of infection and chemotherapeutic interventions did not provide all the answers to lessen people's fears. Extensive med'a coverage about HIV and AIDS, and publicity surrounding celebrities who died from complications of AIDS, caused many HCWs to ask a singular question: How much of an occupational risk do
we have when treating HIV-infected and AIDS patients?

Characterization of HIV structural antigens, marker antibodies, along with the development of increasingly sensitive serological assays, provided Opportunities to investigate suspected cross-infection cases. Despite thou-sands of reported accidental exposures, 33 occupational HIV transmissions were documented by the CDC as of April 1993, with 69 additional cases still under investigation (Table).[20]

A few important trends become apparent when reviewing these data:
- while not zero, the risk of HIV transmission to HCWs continues to be very small compared to other bloodborne infections such as hepatitis B;
- no documented HIV transmission to dental workers has yet been reported.

A very important portion of the findings indicates that 24 of 33 documented occupational HIV transmissions and 27 of 69 possible occupational HIV transmissions have occurred in either nurses or laboratory technicians.

Both groups routinely use hollow needles and collect blood specimens from patients. Blood has been the most common body fluid
involved in occupational HIV transmission to HCWs. Most reported health care injuries involve needlesticks or other sharps accidents.[20]

Recommendations from organizations like CDC incorporated this clinical knowledge into published recommenda-tions These recommendations emphasize the need for HCWs first to consider all patients as potentially infected with HIV or other bloodborne pathogens. Second, they call for rigorous use of infection control precautions to minimize the risk of exposure to blood and other body fluids of all patients.[21]

With specific reference to HIV risks for dental professionals, six cases have been investigated and are currently without identifiable behavioral or transfusion risks. In each instance, percutaneous or mucocutaneous occupational exposure to blood or other body fluids containing HIV was reported, but HIV seroconversion was not documented. A study carried out by the ADA as part of its annual session Health Screening Program suggested further that dentists are at small risk of occupation-ally acquired HIV infection.[22]

Though current data suggest a very low HIV risk for dental care providers, these data should not be interpreted as indicating no risk. Our routine aseptic, barrier, disinfection and sterilization infection control protocols have gone a long way in providing high standards of practice safety for both treatment providers and those receiving care. These standards should not be compromised just because HIV does not seem to be a significant occupational pathogen.

PATIENT RISKS FROM HIV-INFECTED HCWS

Studies investigating HIV risks for dental and medical professionals have been ongoing for years. Then the working environments of HCWs changed dramatically on July 27, 1990. On that date, the CDC reported the first instance of possible HIV transmission from an HIV-infected HCW to a patient.[23] People were stunned. Soon the case involving a Florida dentist was being discussed and debated in many forums. Later reports linking five additional patients to the dentist's HIV strain added to the turmoil and public concern.[24-26]

Unfortunately, the exact 'node of viral transmission has not been determined to date. It probably never will.[27, 28] Without important epidemiological information, the resultant extensive media attention and public proclamations of "instant infectious disease experts" have caused some health professionals and the public in general to draw conclusions based more on frustration, fear and anger than on existing scientific data. No matter what happened, the results have already been tragic for those infected, their families and society in general.

Central to the debate surrounding HIV-infected HCWs is what is considered an acceptable level of risk of HIV transmission. The CDC periodically publishes updated retrospective data on patients of HIV-infected HCWs.

In the most recent report, HIV test results have been completed for 19,036 people who were treated by 57 HIV-infected HCWs.[26] The findings from this investigation, and other recently published reports studying HIV-infected physicians and dentists,[29-32] have not found any other HIV transmission from an infected HCW to patients. The

Florida dentist remains the only documented case of HIV transmission from a treatment provider to patients.

Some elected officials have attempted to address this issue with proposed legislation that would mandate HIV testing for HCWs, and require those found to be infected to disclose their HIV status to patients. Many who work in the area of infectious diseases see substantial problems with this line of thinking.[33]

Any HCW-to-patient transmission of a bloodborne infection such as HIV or HBV would probably occur only within a narrow set of circumstances. Implementation of broad, potentially prohibitory regulations, therefore, does not appear warranted. At the least, many HCWs who believe they may be at risk for HIV infection would be tested anonymously, or avoid testing altogether. *As* a result, the regulations would succeed only in driving potential problems underground.

The risk of transmitting HIV from patient to HCW is much higher than the risk of transmitting from HCW to patient. For this reason, mandatory testing of HCWs is not defensible without a mandate that patients also be tested routinely. In addition, the period for developing positive serological reactions after HIV infection is long enough to suggest that regular retesting for infection be required. In effect, millions of scarce health care dollars would have t be diverted from effective HIV

* * *

(JOHN MOLINARI, P.h.D.)

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[2] Q: And you don't know of any evidence that
[3] supports the assertion that this was an intentional
[4] transmission by Dr. Acer?
[5] A: There was a friend, who went public, of Dr.
[6] Acer a couple years ago who claimed that Dr.Acer had
[7] some ill feelings against people and wanted to
[8] publicize the AIDS epidemic.This has never been
[9] corroborated. In fact, my understanding is that when
[10] this person was questioned by the CDC, there were a
[11] number of holes in that story.
[12] Q: It's correct, is it not, that HIV can be
[13] transnmitted more readily from a patient to a dental
[14] care worker than it can from a dental care worker to
a
[15] patient?
[16] MR. KLEIN: Object to the form.
[17] A: I would answer that the health care worker is
[18] generally the one with increased risk versus the
[19] patient when it comes to bloodborne disease.
[20] Q: (BY MR. MCCARTHY)And why is that?
[21] A: The health care worker is the one
[22] manipulating needles, sharp instruments, handling
[23] contaminated items in between patient care. The
[24] health care worker may be exposed to some sort of

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[1] sharps or percutaneous injury if the patient moves or
[2] flinches unexpectedly during some surgical or other
[3] procedure, and generally they are the ones who are on
[4] the receiving end of these types of accidents.
[5] Q: And that's why you say in your book that you
[6] wrote with Dr. Cottone and Dr. Terezhalmyn,
"Practical
[7] Infection Control In Dentistry," that the danger is
[8] much greater for dentists and dental care workers
than
[9] it is for patients.Am I correct?
[10] A: Correct.
[11] Q: Just for the reasons you've just recited?
[12] A: Correct.

UNITED STATES DISTRICT COURT
DISTRICT OF MAINE

SIDNEY ABBOTT, |
|
Plaintiff |
|
Civil Action No. 94-0273-B
vs. |
|
|
|
RANDON BRAGDON, D.M.D., |
|
|
Defendant |

DECLARATION OF LEON R. KELLEHER, D.D.S.

Pursuant to 28 U.S.C. Sec. 1746, I, Leon R. Kelleher, declare that:

1. I sent a letter dated January 9, 1996, to Dr. Randon E Bragdon, a true and complete copy of which is attached hereto.

2. I hereby incorporate the complete text of that letter as if fully set forth herein.

I hereby declare under penalty of perjury that the foregoing information is true to the best of my knowledge and belief. Executed on March 27, 1996.

/s/

Leon R. Kelleher, D.D.S.

State of Illinois
County of , ss.

On this 27 day of March , 1996, before me personally appeared the above named Leon R. Kelleher and subscribed to the foregoing. .

OFFICIAL SEAL OF ILLINOIS

Notary Public
MY COMMISSION EXP. MAR. 9, 1998

Print name: Kathryn A. Seidel

RUSH PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER
RUSH UNIVERSITY
1653 West Congress Parkway, Chicago, Illinois 60612-3864
RUSH
SECTION OF DENTISTRY
Leon R. Kelleher, DDS. Director

January 9, 1996

Dr. Randon E. Bragdon
30 Judson Boulevard
Bangor, Maine 04401

Dear Dr. Bragdon:

We read with appropriate concern the recent (1-8-96) article in the ADA News regarding your alleged discrimination in the case of the HIV positive patient whom you proposed treat in a hospital operatory rather than your office in order to limit the risk of exposure to yourself and your staff. By this time we are certain that you have received letters of support for your position as well as some which are anything but that. Please allow us to add our names to the former list.

Our staff of seventeen dentists practices in a private instramural group which treats more than a hundred known HIV + patients. We share many of your concerns and frequently utilize "special facilities" or measures to assure our safety as well as that of the patient. Let me begin by assuring you that your obvious concerns as to

whether the CDC Guidelines regarding universal precautions are adequate to protect operator as well as patient do have merit. We invite your attention to the enclosed study by Drs. Robinson and Johnson of Stanford University which clearly shows that aerosols generated during the use of certain surgical instruments are contaminated. We are currently designing a study which is intended to show that the HIV can and does contaminate the aerosols generated by the dental high speed handpiece and the ultrasonci cavitron. Until the results of this study are ready for publication we do not intend to rely upon the assurances of the CDC or anyone else who purports that immersing ones head into an-infected aerosol is perfectly safe since it cannot be unequivocally proven that anyone has contraced HIV + in that manner.

In addition to the use of published universal precautions. our standard operating procedure is to avoid the use of aerosol producing instrumentation in known HIV+ cases. Patients who require dental prophylzxis are hand-scaled rather than cleaned ultrasonically. Patients on whom the use of the high speed handpiece is unavoidable are done with high volume evacuation under laminar flow conditions with hood or full face protection and remote air source for the operator. These procedures, of course, do not protect against the HIV+ patient who denies that status on his medical history or who does not yet know of his seroconversion or the patient who is HIV infected and who has not yet seroconverted. The question of whether all patients will eventually require treatment under these conditions remains academic until the results of these studies are finally published, repeated by others, and then disseminated to the profession. There will be no measure of consolation in being the first dentist to contract AIDS

through a contaminated aerosol.

It is somehow ironic that the very patients for whom we assume the most risk are usually the ones who respond to that humanitarian gesture with a lawsuit. One can only wonder whether these special interest groups whose primary banner is political correctness and whose efforts are usually behind the filing of such litigation will be there to support the cause of the first dentist or hy gienist who contracts AIDS from treatment of a patient and is denied disability coverage bv his or her insurer!

Good luck with your appeal.

Respectfully,

/s/

Dr. Leon R. Kelleher
Director
Section of Dentistry

(Journal of Medical Virology 33:47-50)

Human Immunodeficiency Virus-1 (HIV-1) in the Vapors of Surgical Power Instruments

Gregory K. Johnson and William S. Robinson
Divisions of Orthopedic Surgery (G.K.J.) and Infectious Diseases (W.S.R.) Stanford University School of Medicine. Stanford California

Cool vapors and aerosol produced by several common surgical power instruments and not smoke plumes generated with electrocautery or known HIV-1 innoculated blood were gentlybubbled through sterile viral culture media. Tissue culture cells were then added and cell infection was detected by the appearance of HIV-1 P-24 core antigen assayed by ELISA in the culture medium. HIV-1 was cultured from cool aerosols and vapors generated by a 30,000 RPM spinning router tip, an instrument similar to *the* Midas Rex and the Stryker oscillating bone saw. No infectious HIV-1 was detected in aerosols generated by a Valley Lab electrocautery or with a manual wound irrigation syringe known as a Travenol Uromatic irrigator We have demonstrated that HIV-1 can remain viable in cool aerosols generated by certain surgical Power tools and this raises the possibility of HIV transmission to medical personnel exposed to aerosols similarly generated during the care of HIV infected patients. Further work is required to determine whether such a risk exists but caution should be exercised by those exposed to aerosols generated during procedures on HIV-1 infected patients,

INTRODUCTION

Surgeons and other health Care workers are routinely exposed to significant and often prolonged aerosols generated by certain Orthopedic and surgical procedures on bone, soft tissue, and body fluids. When the tissues contain infectious ag ents, there is a Possibility of transmission of the agent to personnel exposed to the aerosols. For example, papilloma virus DNA has been isolated from laser plumes from papilloma lesions, and nasal papillomas are seen to develop in the noses of physicians and operating room staff cumulatively exposed to laser/papilloma Plumes [Garden et al., 19881.

Although HIV-1 appears to be transmitted most frequently by sexual contacts, and by percutaneous and perinatal exposures [Weiss et al., 1985; Melbye. 1986 Henderson et al., 1986: Friedland and Klein. 1986] there is a report of a laboratory worker possibly but not proven to be infected with HIV- 1 by aerosols generated by ultracentrifugation or other manipulation of large quantities of cell culture medium containing tissue culture adapted HIV-1 strain HTLV III [Weiss et al., 1988; Barnes. 19881. That case raises the possibility that individuals might be infected with HIV 1 when performing procedures which strongly aerosolize materials containing infectious HIV. The purpose of this study was to determine if infectious HIV - 1 could be isolated from aerosols generated from human blood containing HIV-1 by common orthopedic and surgical procedures known to cause aerosols.

* * *

DISCUSSION

These experiments show that infectious HIV-1 can be isolated from cool aerosols created from blood

containing HIV-1 exposed to certain surgical power instruments such as a high speed spinning router (analogous to the Midas Rex) and the Stryker oscillating bone saw. Careful inspection revealed that no liquid or solid material passed through the small (2 mm) diameter 20 in length of tubing used to transfer the aerosol generated by these instruments within the canister to the test culture medium, indicating the virus retained surncient infectivity in aerosols generated in this way to infect MT-2 cells in culture. Experiments with noninfected blood, utilizing an industrial quartz-crystal impacter, quantitated the large quantity of micron and submicron aerosols generated with each of our procedures.

The Uromatic syringe wound irrigator device, which can also be expected to generate cool aerosols less efficiently, did not result in positive cultures as strictly defined here, indicating that aerosols created in this way did not contain enough infectious HIV-1 to be detected in the assay used. The electrocautery in either coagulation or cutting mode created visible smoke plumes which were suctioned through culture medium, but no infectious HIV-1 could be detected, raising the Possibility that high temperature of cautery may have inactivated HIV-1

Although these experiments show that HIV-1 retains infectivity in aerosols generated in certain ways, they do not quantitate the risk of HIV transmission to personnel by such aerosols generated under clinical conditions, e.g., in the operating room. The failure to detect HIV-1 in aerosols generated by certain procedures (e.g., cautery or syringe jet) in our experiments does not exclude the possibility of clinical transmission by such procedures. Several variables could influence the risk of such transmission in a clinical setting. The concentrations of HIV in tissues arid body fluids appear

to vary widely in different infected patients and HIV is often cell associated. However, extracellular infectious HIV-1 in moderately high concentrations has been detected in plasma of at least some patients [Ernst et al., 19881. The dose of the w ild type HIV stra ins that might be necessary in an aerosol form to infect via respiratory or mucosal surfaces_exposed to such aerosols, and whether such a dose can ever be generated in clinical situations are unanswered questions. Although our experiments raise the possibility that infectious HIV could be present aerosols generated in clinical practice, the large body of epidemiologic data on prevalence of HIV infections in different Populations [Weiss et al., 1985; Melbye, 1986; Henderson et al., 1986; Friedland Klein, 19861 would suggest that transmission by aerosols is not common. However, there are no published studies precisely examining medical or dental personnel most heavily exposed to aerosols generated in care of HIV infected patients compared with appropriate controls, and such studies would seem desirable based on our findings., There are studies showing that HBV seroconversion is higher in surgical and dental personnel even controlling for penetrating injuries, a result not inconsistent with an aerosol route of infection in some cases [Dienstag and Ryan, 1982]. An experimental approach that might provide some direct information about aerosol transmission of HIV would be exposure of chimpanzees to aerosols potentially containing HIV generated under conditions simulating different clinical procedures that create aerosols, or the use of some other model system such as simian immunodeficiency virus (SIV) and susceptible non-human primates for such experiments. Further work is also needed to better quantify the nature and size of the aerosol particles which can sustain infectious HIV and the length of time the

virus remains viable in aerosol form.

In the absence of definitive studies proving that aerosols in clinical settings pose no risk of HIV transmission to personnel, surgeons, dentists, and others should avoid techniques which generate such aerosols or even smoke plumes with patients known to be infected with HIV. Where such procedures are unavoidable, personnel should consider using high efficiency filtration masks and systems for containing aerosols.

UNITED STATES DISTRICT COURT
DISTRICT OF MAINE

SIDNEY ABBOTT,
Plaintiff

Civil Action No. 94--0273--B

vs.

RANDON BRAGDON, D.M.D.,
Defendant

SECOND DECLARATION OF SANFORD F. KUVIN
M.S., M.D., D.T.M. & H.

Pursuant to 28 U.S.C. Sec. 1746, I, Sanford Kuvin, declare that:

1. I hereby incorporate as if fully set forth herein par. 1 of my September 14, 1995, Declaration in this action. Based upon my education, experience and expertise, I offer the following declaration and opinions.

2. Both the blood and the saliva of an HIV--positive patient contain the human immunodeficiency virus (HIV). There is no scientific evidence that a dentist can become infected with HIV through contact only with saliva from an HIV--positive patient. However, there is scientific evidence that a dentist can become infected with HIV through contact with blood or bloody saliva from a patient infected with the virus that causes AIDS. Transmission of HIV from a patient to a dentist can also certainly occur, for example, if a drop

of bloody saliva, in splatter or in aerosol form, makes contact with a mucous membrane of the dentist such as the eye, the nose or the throat.

3. Page five of Ms. Abbott's brief quotes page 55 of my deposition out of context and thereby tries to suggest that no aerosol transmission of HIV is possible. That is patently false, since it does not differentiate between blood or bloody saliva in aerosol form, and saliva unzuixed with blood, in aerosol form. The context of my deposition, pages 55-59, and especially pages 58-59, makes this clear.

4. Page eight of MS. Abbott's brief wrongly implies that there is no risk of HIV transmission from patient to patient in the dental office. In view of current technologies, the transrnission of viruses and bacteria can occur through the transmission of bloody saliva that has retracted into a water line arid then passed to a subsequent patient. In addition, transmission can occur through infrequent, but inevitable break downs in universal precautions, as, for example, when a previously contaminated needle, handpiece, or other instrument is not properly sterilized or disposed of. Universal precautions, when properly and thoroughly employed, help to reduce the risk of transrnission of HIV, but they do not eliminate the risk.

5. Universal precautions simply do not equate with universal safety. The inexplicable transfer of clusters of hepatitis a virus ("HBV") to patients that have occurred during invasive medical procedures when universal precautions were diligently employed attest to this fact. HBV is a bloodbcrne virus spread by identical methods as HIV.

6. The recently published article by David Lewis and Max Arens in the prestigious peer reviewed journal Nature Medicine (attached as Exhibit 7 of Dr. Bragdon's Motion for summary Judgment) indicates that the risk of transmission of HIV from patient to patient in dental of fices may be greater than many experts *had* previously suspected.

7. Tuberculosis (TB) is spread casually by droplet infection.

8. The CDC states in the attached excerpt from MMWR that HIV infectior. is the strongest risk factor yet identified for the development of TB disease in persons having TB infection, and that 811 H:V-inf ected persons should receive a PPD-tuberculin skin test in *settings* where HIV-infected persons receive care.

9. The CDC recommends that all persons with HIV be suspected of having TB and that they may be referred to an appropriately engineered facility (e.g., one with ultraviolet germicidal irradiation and high-efficiency part culate air filtration (HEPA)) for dental treatment involving cough-inducing or aerosol-generating procedures.

10. The CDC's recommendations regarding TB and HIV in the dental setting are, if not logically inconsistent, certainly are in tension with one another. This tension may be the result of (i) the political and civil rights atmosphere surrounding H:v that has led the CDC to downplay the *risk* of transmission of HIV, and (ii) the absolutely non-political, non-civil rights atmosphere of tuberculosis. However, since the CDC's

recommendations regarding TB in the dental setting are of more recent origin than the CDC's last official pronouncement regarding HIV in the dental setting, it may also be the case that the CDC is finally in the process of beginning to deal more responsibly with the gravity of the issue of HIV in the dental setting. TB is a reportable disease in Maine, but HIV is not.

11. Based upon and consistent with CDC recommendations regarding TB, Dr. Bragdon could, as a general rule, decline to perform cough-inducing or aerosol-generating dental procedures (such as filling a cavity) on any HIV positive person in his office on grounds that he or she can reasonably be suspected of having active TB and should receive such treatment in an appropriately engineered facility, as recommended by the CDC.

12. Based upon the conf licting recommendations of the CDC regarding HIV in the dental setting, a dentist might also reasonably decide to discount the possibility of active TB in an HIV-positive person who does not seem infectious with active TB. *A* more conservative approach, however, would be for the dentist to adopt a general policy of referring all cough-inducing, or aerosol-generating, procedures on HIV-positive patients to an appropriately engineered TB facility. This is because, among other things, it is quite difficult to diagnose active TB in a person with HIV. People with HIV often show false negatives for active TB when given the customary tuberculin purified protein derivative (PPD) test. Even chest x-rays often fail to reveal active TB in a person with HIV. And simply because a person looks healthy and is not coughing does not mean that she does not have active TB.

13. Because it is difficult, if not impossible, for a dentist in his office to diagnosis active TB in a person with HIV, and because people with HIV are at high risk for active TB, the CDC's recommendation that all people with HIV who are to undergo cough-inducing or aerosol-generating dental procedures should be considered infectious with TB, makes medical sense, as does the automatic referral of *such* cases to an appropriately engineered dental facility.

14. TO the best of my knowledge, no CDC publication has ever concluded that dentists should perform invasive dental procedures on HIV-positive patients ill the office setting. Instead, the CDC has carefully limited itself to the unremarkable conclusion that such procedures "can" or "may" be performed safely with the use of universal precautions, and that additionalprecautions are therefore "unnecessary."

15. To the best of my knowledge, no CDC publication, or any reliable, published authority, has ever concluded that the risk of transmission of HIV from patient to dentist using universal precautions during an invasive procedure is infinitesimal. The CDC characterizes the risk as "small."

16. Because of the dearth of comprehensive, scientific studies on the issue, some authorities conclude that the risk of transmission of HIV from patient to dentist cannot be accurately *quantified.* While this is arguably true, some fairly reasonable estimates can nevertheless be constructed from available, although limited, data. For example, the average dentist performs approximately 3,000 invasive procedures per year (in contrast to 500 for

the average surgeon), and Dr. Greenspan reports an average of 1.5 needle-stick injuries per 100 infections given by dentists. See Greenspan Dep. at *156-159.* The CDC now estimates that the rate of fatal outcomes from percutaneous injuries causing contact with contaminated blood is approximately 3 per 1000. Not all needle-stick injuries to dentists result in parenteral exposure to a patient's blood. Assuming only 1 in 3 *such* injuries result in such exposure, the risk of a dentist receiving a fatal needle-stick while giving one injection to a single HIV-positive patient is (1.5/100) x (1/3) x (3/1000), which is equal to 4.5/300,000, which is equal to 1/66,667. According to calculations provided to me by Professor Halteman (attached), this means that if a dentist practices for 30 years, and gives an average of 235 injections per year to HIV-positive patients, that dentist has more than a 10% chance of sustaining at least one fatal, HIV needle-stick injury during that time. In addition, if the dentist gives only 5 injections per year to HIV-positive patients for 30 years, the dentist has more than a 50% chance of sustaining at least one percutaneous exposure to HIV-infected blood, which is a life-threatening event.

17. The method employed in the previous paragraph to estimate the risk to dentistsfrom accidental needlesticks accords entirely with the method employed by Dr. David Bell from the CDC to estimate the risks to patients from HIV-infected surgeons. The Fourth Circuit relied upon Dr. Bell's estimate in & case called Doe v. University of Maryland Medical Systems Corp., 50 F.3d 1261, 1263 (4th Cir. 1995). I served as an expert witness on behalf of the hospital in that case. We know that the dental profession is more invasive than the practice of most surgeons, and that blood is a two-way street.

18. The estimate in the next to the preceding paragraph does not take into account the additional risk of percutaneous injuries to dentists caused by the dental bur and other sharps. Nor does it take into account the additional risk of exposure to blood or bloody saliva in aerosol form that penetrates mucous membranes or nonintact skin. The estimate in the preceding paragraph is theref ore a conservative estimate

19. Dr. Craven is wrong in his Affidavit, ¶¶ 7-10, to imply that sorriehow the risk of transmission of HIV from patient to dentist is less than one in a billion. This analysis is severely flawed for several reasons.

a. Of his estimated 1e4 billion to 2.8 billion dental procedures in the United States since 1982, only a small percentage of them were performed on people with HIV It is patently fallacious to imply that the risk of transmission of HIV from patient to dentist is low because patients without HIV have not transmitted HIV to their dentists.

b. Dr. Craven incorrectly states that the CDC has monitored the occupational transmission of HIV from patients to dentists When a person with HIV goes to a dentist, knowingly or unknowingly, it is not reported to the CDC. When a dentist sticks himself with a needle, or has a sharps injury, it is seldom reported to the CDC. Various institutions do have rules for the reporting of needlesticks, and studies have shown that underreporting of needlestick injuries range from 70% to 95%. See AIDS Clinical Care, Vol. 5, No. 10, p. 78 (Oct. 1993). The CDC has also cited 1983 and 1991 studies for the view that as few as 10% of percutaneous injuries are reported. See Ex. 1 of Dr. Bragdon's Motion for Summary Judgment, p.

320.

One of those studies cited by the CDC, which is a reliable authority found in the American Journal of Medicine, is attached. The authors state that failing "to report exposures to HIVinfected blood leads to an inaccurate estimation of prevalence and a subsequent underestimation of the overall occupational risk of acquiring HIV infection" and that the "reported circumstances of exposure suggest that compliance with current infection-control procedures will not prevent many needlestick injuries." Based on their data, the authors extrapolated that approximately 1 in 1,000 medical interns will become infected with the AIDS virus during only 12 months of *working* in hospitals as a result of accidental needlesticks.

OSHA regulations require dentists to keep records of sharps injuries suffered by their employees, but the regulations do not require that the records be sent to OSHA, much less to the CDC. See 29 CFR Sec. 1910.1030(h)(3).

c. In reality, what the CDC euphemistically refers to as its "passive surveillance system," Ex. 1 of Def.'s Mot. for Summ. J., p. 320, is that every once in a while a dental worker who has reason to suspect he or she has been infected by an accidental exposure to HIV-infected blood has, for whatever reason, decided tocontact the CDC. According to page 1238 of a CDC article in the September 1995 issue of JADA (attached as Ex. la to Dr. Bragdon's opposition memorandum), this type of voluntary disclosure has happened 19 times. Then, if the dental worker is immediately tested for HIV and is negative, and later tests positive in one to six

months, and has no other risk factors, he or she becomes a documented case of HIV transmission. If he or she has no other risk factors, but is not immediately tested and then tests positive in one to six months, he or she becomes a possible" case of occupational transmission. There have been 6 such "possible" occupational transmissions to dental workers out of only 19 reported exposures. See id., Ex. 1a at 1240. Thus, almost 1/3 of all reported exposures for dental workers are cases in which dental workers have *HIV,* and no other identifiable risk factors apart from accidental occupational exposures. With other, non-politically charged infectious diseases such as hepatitis B, the practice in the medical profession has been to treat analogous "possible" cases as actual cases, and to make policy accordingly.

d. Dr. Craven's analysis, which is based only upon the lack of any CDC documented occupational transmission of HIV to a dentist, necessarily overlooks the risk of HIV transmission from blood, or bloody saliva, in aerosol form. in fact, there are over twice as many CDC reported cases of HIV-infected health care workers without any identifiable non-occupational risk factors, but whose Source of HIV-infection is officially unknown (91 such cases), than there are CDC documented cases of occupational transmission of HIV to health care workers (42 such cases).

20. Ms. Abbott's brief on page 11 wrongly implies that I believe Ms. Abbott would have a ten percent risk of acquiring an infection just from having her cavity filled as an outpatient in a hospita1. The ten percent figure discussed during my deposition is for patients who are in ahospital for a prolonged stay, and not for the relatively brief stay of a dental outpatient visit.

21. As a matter of medical ethics, I believe that Providing routine dental care to HIV-positive patients is not so inherently dangerous that dentists should not be required to provide such care. However, page 11 of Ms. Abbott's brief incorrectly implies that I believe Dr. Bragdon should be compelled to treat Ms. Abbott in his dental office. The context of my statement during my deposition, pages 188-189, shows that I also believe as a matter of medical ethics, that Dr. Bragdon should have the right to exercise dental and medical judgment about where and how to treat his patients in a Professionally confident, comfortable, and comprehensive setting. As a matter of law, because of the significant risk to Dr. Bragdon, I believe that *he* cannot and should not be compelled against his will and judgment to perform such invasive procedures in his office.

I hereby declare under penalty of perjury that the foregoing information *is* true to the best of my knowledge and belief.

Executed on October 4 1995.

OFFICIAL NOTARY SEAL
PUBLI MOLLIE GUTIERREZ
Sanford F. Kuvin,M.D. did personally

COMMISSION NUMBER
CC202490
appear before me on this day and being perso nally known to me.

MY COMMISSION EXP.
JUNE 21 1996

/s/

Mollie Gutierrez,Notary

UNITED STATES DISTRICT COURT
DISTRICT OF MAINE-

SIDNEY ABBOTT,
Plaintiff Civil Action No. 94-0273-3
vs.

RANDON BRAGDON D.M.D.,
Defendant

AFFIDAVIT OF ARLEEN RICHMAN

The affiant Arleen Richman, being duly sworn deposes and says:

1. My name is Arleen Richman. I am of legal age and under no legal disability.

2. I am the Director of Communications of the United States Parachute Association (USPA), 1440 Duke Street, Alexandria, VA 22314. In my capacity as such, I have personal knowledge of the facts stated in this affidavit.

3. Since 1984, it has been the regular practice of the USPA to compile the statistics concerning the number of deaths per jump that are contained in the attached table for years 1984 to 1992. These statistics are derived from inf ormation received from people with knowledge of the relevant numbers of jumps and associ ated skydiving fatalities, and who keep such information in the regular course of their skydiving associations. The statistics concerning the number of deaths per jump for years 1984

to 1992 were complied at or near the time such information was received.

/s/
Arleen Richman

DATED: September 29, 1995

STATE OF *VIRGINIA*
Date Sept. 29, 1995

Personally appeared the above-named Arleen Richman, who first being duly sworn, made oath that the foregoing affidavit which she has signed and to which she subscribed is based on her personal knowledge and that the facts set forth therein are true.

Before me,

/s/

Name: Notary Public

My Commission Expires as September 30, 1999

SKYDIVING AT GLANCE

United States Parachute Association *(USPA)*

(703) 836-3495

WHO SKYDIVES? You're in good company - USPA membership is slightly over the 29,000 mark and growing by about 5% a year. About 12-15% of our members are women. More than 90% of our members have a high school diploma; 40% are college graduates. Members range in age from *16* - (permissable at some Drop Zones) to well into their 70's and 80's.

CAN ANYONE JUMP? Almost anyone can successfully complete a first jump. No experience is required. Individual skydiving centers, called Drop Zones or DZs, set their own guidelines. Generally, you need to be in good heatth, age 18 (16 with parental consent, if DZ policy allows) and weigh no more than 225 pounds.

HOW DO I START? USPA recognizes 3 types of first jumps:

Tandem: Student is attached to the front of the Instructor's harness and is carried as a passenger throughout the jump from exit until landing. Requires minimal ground school.

Static Line: You exit solo from the aircraft. Your chute is automatically deployed as you exit the plane at about 3,000 feet. Requires ground school and attaining learning objective.

AFF: Two Jumpmasters exit the aircraft holding on to you (one on each side) and assist (Accelerated you while you freefall for about 45 seconds. Once you open the

parachute, the Freefall) Jumpmasters leave and you make a solo descent. Requires classroom instruction prior to first jump. This training program progresses through 7 levels of instruction, at which time you should be well on the way to meeting the requirements for your "A" license.

WHERE: At a Drop Zone that is a Group Member of the USPA, USPA Group members have. pledged to follow USPA Basic Satety Requirements and Recommendations for student and advanced skydivers and to offer first-jump courses taught by USPA rated instructors. See the attached listing for the Centers nearest you.

HOW MUCH: Expect to pay between $150 and $200 for a first tandem or static line jump. First time freefall costs between $250 and $300. Fees Include all equipment and training. Experienced skydivers (those who jump without instruction) can jump for between $6 and $20 depending on type of aircraft used and altitude of exit.

THE RISK: Parachuting has an Inherent risk but new and modern equiprnent, improved techniques, and USPA certified instructors have sharply reduced most of the dangers. Annual rate of fatalities is usually between 26 and 30 or approximately 1.2 in 100,000 jumps.

TO ENHANCE YOUR SAFETY:

*Plan to make your first jump at a USPA Group Member
*Ask to see the instructor's USPA rating "Use an Automatic Activation Device (AAD) required by USPA's Basic Safety Requirements "Check out the Drop Zone BEFORE you jump. How exprienced are the pilots and how well maintained are the planes? What

feeling/attitude do you get when you visit the DZ? Does safetyseem to be eveyone's first concern?

Blue Skies!!!!!! Hope to see you up there soon!!
Any Questions- call 703-836-3495.

Although skydiving is statistically a safe sport, it is inherently dangerous, with the proper training and equipment the risk can be minimized.

Year	Participants	Jumps	Fatalities	Deaths per Jump*	Deaths Per Participant*
1983/	101,500	UKN	29		28.5
1984/	100,300	2,373,000	33	1.2	32.9
1985/	102,100	2,329,000	26	1.1	25.5
1986/	105,600	2,246,000	30	1.3	29.4
1987/	108,200	2,289,000	28	1.2	25.9
1988/	110,700	2,297,000	23	1	20.8
1989/	111,880	2,352,000	36	1.5	32.2
1990/	115,500	2,400,000	23	0.9	19.9
1991/	121,900	2,440,000	30	1.2	24.6
1992/	136,528	2,600,000	27	1	19.7

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5 YEAR AVERAGES

YEARS	PARTICIPANTS	FATALITIES	DEATHS PER PARTICIPANTS*
87-91	113,536	28	24.6
82-86	104,250	29.4	28.2
77-81	108,940	49	44.9
72-76	99,000 est	40.6	41.0 est

All accidents 34.9*
motor vehicles (ages 25-44) 32.0*
in 33 states the accidental death rate is g eater than 35 deaths per 100,000 population
*** based on ratio of deaths per 100,000 (jumps or participants)**

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DESIGNATED AIDS CARE CENTERS

RANDON BRAGDON, D.M.D.

It has been well demonstrated and documented that persons that are HIV- or have full blown AIDS get the best care in settings where they are able to get specialized care by health care professionals.

The largest AIDS dental clinic in New York City treated 3,000 patients last year. In talking to professionals who are familiar and/or work iwth these designated AIDS Care Centers, they work well and are well liked by the AIDS patients themselves. This is hardly surprising as just about everyone likes to get the best possible care.

The state of New York with its extensive treatment of AIDS patients in New York City in the early 1980's, soon determined that simplistic crisis oriented approach to AIDS care did not work very well. As a result, in 1986 the State of New York instituted Designated AIDS Care Centers. There are now twenty-three of these AIDS Care Centers include dental facilities which are able to provide comprehensive care. The remaining one-forth of the Designated AIDS Care Centers also have dental facilities, but they could not be described as completely comprehensive. It is their goal for all such dental AIDS facilities to be able to provide comprehensive dental care.

In about 74% of the Designated AIDS Care Centers, the AIDS patients are kept in AIDS units. This puts to rest the myth that AIDS patients cannot have their own ward and that nurses cannot know who they are. In two centers combination of AIDS unit/ scatter beds is used and in three centers scatter beds are used.

They have found that the coordinated AIDS multidisciplinary team with the continuum of care model has worked well. Not only do the AIDS patiens receive better quality care, but the number of in-patient hospital days per patient has been reduced dramatically. As a result, the centers receive enhanced per diem reimbursement rates.

The twenty-three centers treat about 40% of the NYS AIDs patients. NYS took the successful AIDS Center approach because their extensive experience proved that AIDS patients have a multitude of problems on an ongoing changing basis until they finally succumb to the ravages of the AIDS virus.

It is clear that Maine also needs designated AIDS Centers which include comprehensive dental care. The NY experience shows that the multidisciplinary team approach with a continuum of care model has merit. Recently the Maine Medical Center has started an AIDS Center. This start has been well received by AIDS patients. Also, the Maine Medical Association has voted to help establish AIDS centers. I believe that ht e Maine Dental Association should work for the establishment of comprehensive dental facilities in multidisciplinary AIDS centers.

I have included some rather extensiv einformation form the NYS AIDS Institute Bureau of HIV Healthcare for your consideration.

The Delaware Dental Association has established a hospital based AIDS dental clinic in cooperation with the State of Delaware. I have talked to Robert Rosen, D.M.D., the president of the Delaware Dental Association. HE was very helpful and felt that dentists have a right to feel that their private offices are not a proper environment for HIV/AIDS patients. I have included the tedt of his speech given at the dedication of the Bissell hospital Dental clinic for your information.

There is also an AIDS Dental facility in Houston, Texas.

The Maine Dental Association stands poised to start a good thing for the citizens of Maine. We can help provide the best possible dental care for HIV/AIDS patients while at the same time providing the maximum protection to the uninfected citizens of Maine.

(Depo. Testimony of Don Craven, M.D. / July 21, 1995)

[13] Q: Do you believe it would be acceptable to [14] compel Dr. Bragdon to treat HIV patients in his [15] office if there was a substantial likelihood of one [16] transmission of HIV to Dr. Bragdon or his staff [17] over a 20-year period?

[18] MR. KLEIN:Object to the form.

[19] A: Well, maybe you could break the question [20] down into some different parts. I think it's a [21] complex question, so there are several issues [22] there. I can't sort of give you a yes or no answer [23] to all the things in the sentence. Maybe if you [24) could break it down into different parts I could

[1] give you a more accurate answer.
[2] Q: I take it you do think it's acceptable to [3] compel Dr. Bragdon to treat HIV-positive patients?
[4] MR. KLEIN:Objection to the form.
[5] Q: I thought this was the basis of the
[6] case. Maybe I'm wrong.
[7] MR. KLEIN:You're asking him for an [8] ultimate legal -
[9] Q: What you do believe?
[10] A: I believe that Dr. Bragdon should provide [11] dental services to HIV-infected patients.
[12] Q: And my question to you is given that [13] assumption, given that desire, would you still [14] believe it if there was a substantial likelihood of [15] one single transmission of HIV to Dr. Bragdon or [16] his staff let's say over a 20-year period?
[17] A: I wouldn't wish anything like that on Dr. [18] Bragdon or his staff, but I think that would not [19] change my opinion in providing services.
[20] Q: That's all I am getting at. You feel [21] that's a risk they're required to take? [22] A: Life is a risk.
[23] Q: Would the same be true if we reduce the [24] time frame to 10 years?

[1] A: Yes.
[2] Q: Would it be true if we reduced it to one [3] year?
[4] MR. KLEIN: I object.
[5] A: I don't know what you're getting at. I [6] obviously would not wish anyone -
- there's [7] obviously a risk, and I think he should provide [8] services. I'm not saying when you provide services [9] you provide it risk free and nothing happens. So [10] the time frame makes no difference to me.

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(AGD IMPACT June 1997)

Treating needlestick in juries from HIV-positive patients
One dentist gets a crash course in protocol
by Beth Burmahl

While injecting an HIV-positive patient with a local anesthetic last December, a Tennessee practitioner felt a sharp stick penetrate his double-gloved hand as he pulled the syringe from the patient's mouth.

The two pairs of gloves he wore as a precautionary measure did little to repel the needle's pierce, and the next thing he knew, "Boom, I was stuck," he says.

His heart sank when he saw a tiny speck of blood on one of his fingers, and was naturally "scared to death." My brain began to flash multiple messages." he says, and without telling any one what happened, he mechanically changed needles and finished injecting the anesthetic. Immediately afterward, he made a frightened phone call to his physician to get the latest protocol for treating needle stick injuries-- some thing he hadn't done beforehand even though several of his patients are HIV-positive.

Unfortunately, his physician wasn't sure what the latest protocol was in the quickly-changing area of treatment, but he got the information from the Arkansas Department of Health, which follows U.S. Public Health Service recommendations. The health department ordered a full set of blood tests and told the dentist to start drug therapy immediately.

Within five hours of the needlestick, he was on a heavy-duty "cocktail"

3300 milligrams of drugs including ZDV (AZT), Epivir, and Crixivan, the same combination now being prescribed to patients in active AIDS treatment. Soon he would be feeling some of the same effects - nausea, fatigue, diarrhea. But the emotional upheaval was even worse. How long would he be on this "cocktail?" Could he go back to work? What were his chances of contracting the virus, and most importantly, when would he know whether he contracted HIV or not?

To his great relief, the prognosis was good. He would be on the medication for a month, and could return to work

right away if he felt good enough. He would know for certain whether he contracted the disease in six months, and was advised to practice abstinence or safe sex during that time. He was not at a high risk. This occurs during exposure to both larger volumes of blood (a deep injury with a large bore hollow needle that was in a patient's vein or artery _ especially those involving a needle which contains a quantity of the patient's blood) and blood containing a high titer of HIV (a patient with acute retroviral illness or end-stage AIDS), according to the health department.

Even though the Tennessee dentist's needlestick penetrated the skin, his physician said he was an "extremely low risk" for contracting the infection since the speck of blood came from his own finger, since the patient he was treating was HIV-positive but hadn't developed AIDS, and since he was using a 30-gauge needle, which has a smaller bore. Percutaneous exposure carries a higher risk than the two other areas of exposure: mucous membrane and the skin surface.

According to the health department, risk of infection following parenteral needlestick exposure to blood infected with HIV is less than 0.3 percent overall. The dentist breathed a sigh of relief, but didn't exhale quite yet. Even a slim possibility of infection was a heavy burden to bear considering the possible consequences if the infection did occur.

More blood tests were needed - one at two weeks, four weeks, three months and six months. The side effects of the drugs felt like "a light case of the flu," but the dentist felt well enough to return to work immediately, and go on with his life as best he could. He didn't tell his patients about the ordeal, but says he was "extremely careful, like I always am," when treating them. He tested negative at three months, and even though there's a slim chance he could still contract the virus, he believes he's now "out of the woods."

"I won't know officially for another three months, but I'm incredibly hopeful," he says. "I honestly didn't think this could happen to me. Like other dentists, I thought I could prevent it. We all need to know the protocol and be prepared."

Incidents like the one the Tennessee dentist experienced are happening less, mainly because needlestick injuries in general appear to be declining due to the widespread awareness about HIV infection and the number of

preventive devices that have been developed.
"Needlestick injuries are way down," says Joseph L. Konzelman, Jr., DDS, associate professor in the department of oral diagnosis and patient service, school of dentistry, Medical College of Georgia. Dr. Konzelman says that when he worked at Walter Reed Hospital in 1981, "of the 103 people in my clinic, we used to average two sticks a day. Sticks there now are very unusual because of all the precautions and new devices and techniques. We have less than six a year. And we have far less at the Medical College of Georgia."
Dentists should always follow the universal precautions prescribed by OSHA (as the Tennessee dentist does), and devise a plan for handling needle stick injuries, regardless of their frequency. Dentists should get the name and address of the local health department or an infectious disease specialist, and call the physician to discuss the latest protocol for needlestick injuries. They should also make sure they'll have access to the drugs they will need should an injury occur.
If a dentist experiences a serious needlestick injury from a patient whose HIV status is unknown, he or she should ask the patient to take a blood test, which they are within their rights to refuse, says Dr. Konzelman. But he says that would be extremely rare. In that type of case, the dentist should wait for the results of the blood test which can be expedited in a few hours, before beginning treatment. Treatment for a needlestick from a known HIV-positive patient should optimally begin within two hours, and preferably before four hours, according to the health department.
When AIDS first erupted on the scene, needlestick injuries were treated with the same medication AIDS patients were receiving at that time: AZT. These days, "many new drugs have been shown to be remarkably effective when used in combination (with AZT) against the HIV infection itself," according to Dr. Konzelman, who says those drugs or some combination of them are also being used to treat needlestick injuries from HIV-positive patients.
In June 1996, the U.S. Public Health Service published recommendations for chemoprophylaxis after occupational exposure to HIV-positive patients. The postexposure prophylaxis (PEP) recommendations are based on a known exposure to HIV-positive patients.

These recommendations don't address non-occupational (sexual) exposure. The recommendations are: 200 milligrams three times a day of ZDV (Retrovir); 150 milligrams twice a day of Epivir (Lamivudine), and 800 milligrams three times a day of Crixivan (Indinavir). The choice of combination depends on the type of exposure: source materials; availability of medications; and existing contraindications.
Cheryl Newman, associate professor of Infectious Diseases and Medicine at the Medical College of Georgia, says the individual physician determines the exact drug regimen, but that "most hospitals already have needlestick prophylactic programs in place, and they have been modifying them in concert with the new recommendations."
Although the worst side effect the Tennessee dentist experienced was "feeling cruddy," the blood tests were also done to gauge the development of a more serious side effect: liver damage. Potential adverse reactions for both ZDV (AZT) and Epivir listed by the health department include a notation that "dosage must be adjusted in case of renal failure."
But Dr. Newman says that while the medication may elevate a chemical in the blood that comes from the liver, there "is no significant danger" to the liver from short-term exposure to the drugs.
Regardless of the number of risks he was exposed to and the psychological trauma he and his family endured, the dentist says he emerged from the situation wiser, and possibly a little less frightened.
But he's no more apprehensive about treating HIV-positive patients than he was before the experience, saying, "they have the same right as anyone else to get dental care."

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Patient Rights, Provider Rights: BALANCING THE CONFLICT

(First in a two part series)

BY PETER M. SFIKAS, J.D.

A federal appeals court decision in an HIV discrimination case raises tough questions about the rights of providers vs. the rights of patients.

An HIV-infected person with no obvious symptoms of AIDS comes to your office for treatment. You want this person to receive proper care, but you have concerns about your safety, the safety of your staff.

You wonder to yourself: can the government really force me to put aside my safety concerns and treat this person? How can this patient have rights as being "disabled" or "handicapped" when he or she is asymptomatic and not obviously limited by his or her HIV status? Even if the patient has rights, don't I have rights, too? And what about my professional judgment? Shouldn't I be allowed to decide whether it's safe for me to treat this patient or how best to do so?

Such questions were raised in the 1st Circuit Court of Appeals' decision on Abbott vs. Bragdon. In March, the appeals court affirmed a summary judgment that Maine dentist Randon Bragdon had violated the Americans with Disabilities Act when he refused to treat an HIV-infected patient in his private dental office. The court's opinion reads as a virtual case study on the delicate legal balance between provider and patient rights.

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service

Recommended Infection-Control Practices for Dentistry, 1993

Summary

This document updates previously published CDC recommendations for infection-control practices in dentistry to reflect new data, materials, technology, and equipment. When implemented, these recommendations should reduce the risk of disease transmission in the dental environment, from patient to dental health-care worker (DHCW), from DHCW to patient, and from patient to patient. Based on principles of infection control, the document delineates specific recommendations related to vaccination of DHCWs; protective attire and barrier techniques; handwashing and care of hands; the use and care of sharp instruments and needles; sterilization or disinfection of instruments; cleaning and disinfection of the dental unit and environmental surfaces; disinfection and the dental laboratory; use and care of handpieces, antiretraction valves, and other intraoral dental devices attached to air and water lines of dental units; single-use disposable instruments; the handling of biopsy specimens; use of extracted teeth in dental educational settings; disposal of waste materials; and implementation of recommendations.

INTRODUCTION

This document updates previously published CDC recommendations for infection-control practices for dentistry (1-3) and offers guidance for reducing the risks of disease transmission among dental health-care workers (DHCWs) and their patients. Although the principles of infection control remain unchanged, new technologies, materials, equipment, and data require continuous evaluation of current infection-control practices. The unique nature of most dental procedures, instrumentation, and patient-care settings also may require specific strategies directed to the prevention of transmission of pathogens among DHCWs and their patients. Recommended infection-control practices are applicable to all settings in which dental treatment is provided. These recommended practices should be observed in addition to the practices and procedures for worker protection required by the Occupational Safety and Health Administration (OSHA) final rule on Occupational Exposure to Bloodborne Pathogens (29 CFR 1910.1030), which was published in the Federal Register on December 6, 1991 (4).

Dental patients and DHCWs may be exposed to a variety of microorganisms via blood or oral or respiratory secretions. These microorganisms may include cytomegalovirus, hepatitis B virus (HBV), hepatitis C virus (HCV), herpes simplex virus types 1 and 2, human immunodeficiency virus (HIV), Mycobacterium tuberculosis, staphylococci, streptococci, and other viruses and bacteria -- specifically, those that infect the upper respiratory tract. Infections may be transmitted in

the dental operatory through several routes, including direct contact with blood, oral fluids, or other secretions; indirect contact with contaminated instruments, operatory equipment, or environmental surfaces; or contact with airborne contaminants present in either droplet spatter or aerosols of oral and respiratory fluids. Infection via any of these routes requires that all three of the following conditions be present (commonly referred to as "the chain of infection"): a susceptible host; a pathogen with sufficient infectivity and numbers to cause infection; and a portal through which the pathogen may enter the host. Effective infection-control strategies are intended to break one or more of these "links" in the chain, thereby preventing infection.

A set of infection-control strategies common to all health-care delivery settings should reduce the risk of transmission of infectious diseases caused by bloodborne pathogens such as HBV and HIV (2,5-10). Because all infected patients cannot be identified by medical history, physical examination, or laboratory tests, CDC recommends that blood and body fluid precautions be used consistently for all patients (2,5). This extension of blood and body fluid precautions, referred to as "universal precautions," must be observed routinely in the care of all dental patients (2). In addition, specific actions have been recommended to reduce the risk of tuberculosis transmission in dental and other ambulatory health-care facilities (11).

CONFIRMED TRANSMISSION OF HBV AND HIV IN DENTISTRY

Although the possibility of transmission of bloodborne infections from DHCWs to patients is considered to be small (12- 15), precise risks have not been quantified in the dental setting by carefully designed epidemiologic studies. Reports published from 1970 through 1987 indicate nine clusters in which patients were infected with HBV associated with treatment by an infected DHCW (16-25). In addition, transmission of HIV to six patients of a dentist with acquired immunodeficiency syndrome has been reported (26,27). Transmission of HBV from dentists to patients has not been reported since 1987, possibly reflecting such factors as incomplete ascertainment and reporting, increased adherence to universal precautions -- including routine glove use by dentists -- and increased levels of immunity due to use of hepatitis B vaccine. However, isolated sporadic cases of infection are more difficult to link with a health-care worker than are outbreaks involving multiple patients. For both HBV and HIV, the precise event or events resulting in transmission of infection in the dental setting have not been determined; epidemiologic and laboratory data indicate that these infections probably were transmitted from the DHCWs to patients, rather than from one patient to another (26,28). Patient-to-patient transmission of bloodborne pathogens has been reported, however, in several medical settings (29-31).

VACCINES FOR DENTAL HEALTH-CARE WORKERS

Although HBV infection is uncommon among adults in the United States (1%-2%), serologic surveys have indicated that 10%-30% of health-care or dental workers show evidence of past or present HBV infection (6,32). The OSHA bloodborne pathogens final rule requires that employers make hepatitis B vaccinations available without cost to their employees who may be exposed to blood or other infectious materials (4). In addition, CDC recommends that all workers, including DHCWs, who might be exposed to blood or blood-contaminated substances in an occupational setting be vaccinated for HBV (6-8). DHCWs also are at risk for exposure to and possible transmission of other vaccine-preventable diseases (33); accordingly, vaccination against influenza, measles, mumps, rubella, and tetanus may be appropriate for DHCWs.

PROTECTIVE ATTIRE AND BARRIER TECHNIQUES

For protection of personnel and patients in dental-care settings, medical gloves (latex or vinyl) always must be worn by DHCWs when there is potential for contacting blood, blood-contaminated saliva, or mucous membranes (1,2,4-6). Nonsterile gloves are appropriate for examinations and other nonsurgical procedures (5); sterile gloves should be used for surgical procedures. Before treatment of each patient, DHCWs should wash their hands and put on new gloves; after treatment of

each patient or before leaving the dental operatory, DHCWs should remove and discard gloves, then wash their hands. DHCWs always should wash their hands and reglove between patients. Surgical or examination gloves should not be washed before use; nor should they be washed, disinfected, or sterilized for reuse. Washing of gloves may cause "wicking" (penetration of liquids through undetected holes in the gloves) and is not recommended (5). Deterioration of gloves may be caused by disinfecting agents, oils, certain oil-based lotions, and heat treatments, such as autoclaving.

Chin-length plastic face shields or surgical masks and protective eyewear should be worn when splashing or spattering of blood or other body fluids is likely, as is common in dentistry (2,5,6,34,35). When a mask is used, it should be changed between patients or during patient treatment if it becomes wet or moist. Face shields or protective eyewear should be washed with an appropriate cleaning agent and, when visibly soiled, disinfected between patients.

Protective clothing such as reusable or disposable gowns, laboratory coats, or uniforms should be worn when clothing is likely to be soiled with blood or other body fluids (2,5,6). Reusable protective clothing should be washed, using a normal laundry cycle, according to the instructions of detergent and machine manufacturers. Protective clothing should be changed at least daily or as soon as it becomes visibly soiled (9). Protective garments and devices (including gloves, masks, and eye and face protection) should be removed before personnel exit areas of the dental office used for laboratory or patient-care activities.

Impervious-backed paper, aluminum foil, or plastic covers should be used to protect items and surfaces (e.g., light handles or x-ray unit heads) that may become contaminated by blood or saliva during use and that are difficult or impossible to clean and disinfect. Between patients, the coverings should be removed (while DHCWs are gloved), discarded, and replaced (after ungloving and washing of hands) with clean material.

Appropriate use of rubber dams, high-velocity air evacuation, and proper patient positioning should minimize the formation of droplets, spatter, and aerosols during patient treatment. In addition, splash shields should be used in the dental laboratory.

HANDWASHING AND CARE OF HANDS

DHCWs should wash their hands before and after treating each patient (i.e., before glove placement and after glove removal) and after barehanded touching of inanimate objects likely to be contaminated by blood, saliva, or respiratory secretions (2,5,6,9). Hands should be washed after removal of gloves because gloves may become perforated during use, and DHCWs' hands may become contaminated through contact with patient material. Soap and water will remove transient microorganisms acquired directly or indirectly from patient contact (9); therefore, for many routine dental procedures, such as examinations and nonsurgical techniques, handwashing with plain soap is adequate. For surgical procedures, an antimicrobial surgical handscrub should be used (10).

When gloves are torn, cut, or punctured, they should be

removed as soon as patient safety permits. DHCWs then should wash their hands thoroughly and reglove to complete the dental procedure. DHCWs who have exudative lesions or weeping dermatitis, particularly on the hands, should refrain from all direct patient care and from handling dental patient-care equipment until the condition resolves (12). Guidelines addressing management of occupational exposures to blood and other fluids to which universal precautions apply have been published previously (6-8,36).

USE AND CARE OF SHARP INSTRUMENTS AND NEEDLES

Sharp items (e.g., needles, scalpel blades, wires) contaminated with patient blood and saliva should be considered as potentially infective and handled with care to prevent injuries (2,5,6).

Used needles should never be recapped or otherwise manipulated utilizing both hands, or any other technique that involves directing the point of a needle toward any part of the body (2,5,6). Either a one-handed "scoop" technique or a mechanical device designed for holding the needle sheath should be employed. Used disposable syringes and needles, scalpel blades, and other sharp items should be placed in appropriate puncture-resistant containers located as close as is practical to the area in which the items were used (2,5,6). Bending or breaking of needles before disposal requires unnecessary manipulation and thus is not recommended.

Before attempting to remove needles from nondisposable aspirating syringes, DHCWs should recap them to

prevent injuries. Either of the two acceptable techniques may be used. For procedures involving multiple injections with a single needle, the unsheathed needle should be placed in a location where it will not become contaminated or contribute to unintentional needlesticks between injections. If the decision is made to recap a needle between injections, a one-handed "scoop" technique or a mechanical device designed to hold the needle sheath is recommended.

STERILIZATION OR DISINFECTION OF INSTRUMENTS

Indications for Sterilization or Disinfection of Dental Instruments

As with other medical and surgical instruments, dental instruments are classified into three categories -- critical, semicritical, or noncritical -- depending on their risk of transmitting infection and the need to sterilize them between uses (9,37-40). Each dental practice should classify all instruments as follows:

•Critical. Surgical and other instruments used to penetrate soft tissue or bone are classified as critical and should be sterilized after each use. These devices include forceps, scalpels, bone chisels, scalers, and burs.
•Semicritical. Instruments such as mirrors and amalgam condensers that do not penetrate soft tissues or bone but contact oral tissues are classified as semicritical. These devices should be sterilized after each use. If, however, sterilization is not feasible because the instrument will be

damaged by heat, the instrument should receive, at a minimum, high-level disinfection. •Noncritical. Instruments or medical devices such as external components of x-ray heads that come into contact only with intact skin are classified as noncritical. Because these noncritical surfaces have a relatively low risk of transmitting infection, they may be reprocessed between patients with intermediate-level or low-level disinfection (see Cleaning and Disinfection of Dental Unit and Environmental Surfaces) or detergent and water washing, depending on the nature of the surface and the degree and nature of the contamination (9,38).

Methods of Sterilization or Disinfection of Dental Instruments

Before sterilization or high-level disinfection, instruments should be cleaned thoroughly to remove debris. Persons involved in cleaning and reprocessing instruments should wear heavy-duty (reusable utility) gloves to lessen the risk of hand injuries. Placing instruments into a container of water or disinfectant/detergent as soon as possible after use will prevent drying of patient material and make cleaning easier and more efficient. Cleaning may be accomplished by thorough scrubbing with soap and water or a detergent solution, or with a mechanical device (e.g., an ultrasonic cleaner). The use of covered ultrasonic cleaners, when possible, is recommended to increase efficiency of cleaning and to reduce handling of sharp instruments.

All critical and semicritical dental instruments that are heat stable should be sterilized routinely between uses by

steam under pressure (autoclaving), dry heat, or chemical vapor, following the instructions of the manufacturers of the instruments and the sterilizers. Critical and semicritical instruments that will not be used immediately should be packaged before sterilization.

Proper functioning of sterilization cycles should be verified by the periodic use (at least weekly) of biologic indicators (i.e., spore tests) (3,9). Heat-sensitive chemical indicators (e.g., those that change color after exposure to heat) alone do not ensure adequacy of a sterilization cycle but may be used on the outside of each pack to identify packs that have been processed through the heating cycle. A simple and inexpensive method to confirm heat penetration to all instruments during each cycle is the use of a chemical indicator inside and in the center of either a load of unwrapped instruments or in each multiple instrument pack (41); this procedure is recommended for use in all dental practices. Instructions provided by the manufacturers of medical/dental instruments and sterilization devices should be followed closely.

In all dental and other health-care settings, indications for the use of liquid chemical germicides to sterilize instruments (i.e., "cold sterilization") are limited. For heat-sensitive instruments, this procedure may require up to 10 hours of exposure to a liquid chemical agent registered with the U.S. Environmental Protection Agency (EPA) as a "sterilant/disinfectant." This sterilization process should be followed by aseptic rinsing with sterile water, drying, and, if the instrument is not used immediately, placement in a sterile container.

EPA-registered "sterilant/disinfectant" chemicals are used to attain high-level disinfection of heat-sensitive

semicritical medical and dental instruments. The product manufacturers' directions regarding appropriate concentration and exposure time should be followed closely. The EPA classification of the liquid chemical agent (i.e., "sterilant/disinfectant") will be shown on the chemical label. Liquid chemical agents that are less potent than the "sterilant/disinfectant" category are not appropriate for reprocessing critical or semicritical dental instruments.

CLEANING AND DISINFECTION OF DENTAL UNIT AND ENVIRONMENTAL SURFACES

After treatment of each patient and at the completion of daily work activities, countertops and dental unit surfaces that may have become contaminated with patient material should be cleaned with disposable toweling, using an appropriate cleaning agent and water as necessary. Surfaces then should be disinfected with a suitable chemical germicide.

A chemical germicide registered with the EPA as a "hospital disinfectant" and labeled for "tuberculocidal" (i.e., mycobactericidal) activity is recommended for disinfecting surfaces that have been soiled with patient material. These intermediate-level disinfectants include phenolics, iodophors, and chlorine-containing compounds. Because mycobacteria are among the most resistant groups of microorganisms, germicides effective against mycobacteria should be effective against many other bacterial and viral pathogens (9,38-40,42). A fresh solution of sodium hypochlorite (household bleach) prepared daily is an inexpensive and effective intermediate-level germicide. Concentrations ranging

from 500 to 800 ppm of chlorine (a 1:100 dilution of bleach and tap water or 1/4 cup of bleach to 1 gallon of water) are effective on environmental surfaces that have been cleaned of visible contamination. Caution should be exercised, since chlorine solutions are corrosive to metals, especially aluminum.

Low-level disinfectants -- EPA-registered "hospital disinfectants" that are not labeled for "tuberculocidal" aetivity (e.g., quaternary ammonium compounds) -- are appropriate for general housekeeping purposes such as cleaning floors, walls, and other housekeeping surfaces. Intermediate- and low-level disinfectants are not recommended for reprocessing critical or semicritical dental instruments.

DISINFECTION AND THE DENTAL LABORATORY

Laboratory materials and other items that have been used in the mouth (e.g., impressions, bite registrations, fixed and removable prostheses, orthodontic appliances) should be cleaned and disinfected before being manipulated in the laboratory, whether an on-site or remote location (43). These items also should be cleaned and disinfected after being manipulated in the dental laboratory and before placement in the patient's mouth (2). Because of the increasing variety of dental materials used intraorally, DHCWs are advised to consult with manufacturers regarding the stability of specific materials relative to disinfection procedures. A chemical germicide having at least an intermediate level of activity (i.e., "tuberculocidal hospital disinfectant") is appropriate for such disinfection. Communication between dental office and dental laboratory personnel regarding the handling and

decontamination of supplies and materials is important.

USE AND CARE OF HANDPIECES, ANTIRETRACTION VALVES, AND OTHER INTRAORAL DENTAL DEVICES ATTACHED TO AIR AND WATER LINES OF DENTAL UNITS

Routine between-patient use of a heating process capable of sterilization (i.e., steam under pressure {autoclaving}, dry heat, or heat/chemical vapor) is recommended for all high-speed dental handpieces, low-speed handpiece components used intraorally, and reusable prophylaxis angles. Manufacturers' instructions for cleaning, lubrication, and sterilization procedures should be followed closely to ensure both the effectiveness of the sterilization process and the longevity of these instruments. According to manufacturers, virtually all high-speed and low-speed handpieces in production today are heat tolerant, and most heat-sensitive models manufactured earlier can be retrofitted with heat-stable components.

Internal surfaces of high-speed handpieces, low-speed handpiece components, and prophylaxis angles may become contaminated with patient material during use. This retained patient material then may be expelled intraorally during subsequent uses (44-46). Restricted physical access -- particularly to internal surfaces of these instruments -- limits cleaning and disinfection or sterilization with liquid chemical germicides. Surface disinfection by wiping or soaking in liquid chemical germicides is not an acceptable method for reprocessing high-speed handpieces, low-speed handpiece components used intraorally, or reusable prophylaxis angles.

Because retraction valves in dental unit water lines may cause aspiration of patient material back into the handpiece and water lines, antiretraction valves (one-way flow check valves) should be installed to prevent fluid aspiration and to reduce the risk of transfer of potentially infective material (47). Routine maintenance of antiretraction valves is necessary to ensure effectiveness; the dental unit manufacturer should be consulted to establish an appropriate maintenance routine.

High-speed handpieces should be run to discharge water and air for a minimum of 20-30 seconds after use on each patient. This procedure is intended to aid in physically flushing out patient material that may have entered the turbine and air or water lines (46). Use of an enclosed container or high-velocity evacuation should be considered to minimize the spread of spray, spatter, and aerosols generated during discharge procedures. Additionally, there is evidence that overnight or weekend microbial accumulation in water lines can be reduced substantially by removing the handpiece and allowing water lines to run and to discharge water for several minutes at the beginning of each clinic day (48). Sterile saline or sterile water should be used as a coolant/irrigator when surgical procedures involving the cutting of bone are performed.

Other reusable intraoral instruments attached to, but removable from, the dental unit air or water lines -- such as ultrasonic scaler tips and component parts and air/water syringe tips -- should be cleaned and sterilized after treatment of each patient in the same manner as handpieces, which was described previously. Manufacturers' directions for reprocessing should be

followed to ensure effectiveness of the process as well as longevity of the instruments.

Some dental instruments have components that are heat sensitive or are permanently attached to dental unit water lines. Some items may not enter the patient's oral cavity, but are likely to become contaminated with oral fluids during treatment procedures, including, for example, handles or dental unit attachments of saliva ejectors, high-speed air evacuators, and air/water syringes. These components should be covered with impervious barriers that are changed after each use or, if the surface permits, carefully cleaned and then treated with a chemical germicide having at least an intermediate level of activity. As with high-speed dental handpieces, water lines to all instruments should be flushed thoroughly after the treatment of each patient; flushing at the beginning of each clinic day also is recommended.

SINGLE-USE DISPOSABLE INSTRUMENTS

Single-use disposable instruments (e.g., prophylaxis angles; prophylaxis cups and brushes; tips for high-speed air evacuators, saliva ejectors, and air/water syringes) should be used for one patient only and discarded appropriately. These items are neither designed nor intended to be cleaned, disinfected, or sterilized for reuse.

HANDLING OF BIOPSY SPECIMENS

In general, each biopsy specimen should be put in a sturdy container with a secure lid to prevent leaking during transport. Care should be taken when collecting

specimens to avoid contamination of the outside of the container. If the outside of the container is visibly contaminated, it should be cleaned and disinfected or placed in an impervious bag (49).

USE OF EXTRACTED TEETH IN DENTAL EDUCATIONAL SETTINGS

Extracted teeth used for the education of DHCWs should be considered infective and classified as clinical specimens because they contain blood. All persons who collect, transport, or manipulate extracted teeth should handle them with the same precautions as a specimen for biopsy (2). Universal precautions should be adhered to whenever extracted teeth are handled; because preclinical educational exercises simulate clinical experiences, students enrolled in dental educational programs should adhere to universal precautions in both preclinical and clinical settings. In addition, all persons who handle extracted teeth in dental educational settings should receive hepatitis B vaccine (6-8).

Before extracted teeth are manipulated in dental educational exercises, the teeth first should be cleaned of adherent patient material by scrubbing with detergent and water or by using an ultrasonic cleaner. Teeth should then be stored, immersed in a fresh solution of sodium hypochlorite (household bleach diluted 1:10 with tap water) or any liquid chemical germicide suitable for clinical specimen fixation (50).

Persons handling extracted teeth should wear gloves. Gloves should be disposed of properly and hands washed after completion of work activities. Additional personal

protective equipment (e.g., face shield or surgical mask and protective eyewear) should be worn if mucous membrane contact with debris or spatter is anticipated when the specimen is handled, cleaned, or manipulated. Work surfaces and equipment should be cleaned and decontaminated with an appropriate liquid chemical germicide after completion of work activities (37,38,40,51).

The handling of extracted teeth used in dental educational settings differs from giving patients their own extracted teeth. Several states allow patients to keep such teeth, because these teeth are not considered to be regulated (pathologic) waste (52) or because the removed body part (tooth) becomes the property of the patient and does not enter the waste system (53).

DISPOSAL OF WASTE MATERIALS

Blood, suctioned fluids, or other liquid waste may be poured carefully into a drain connected to a sanitary sewer system. Disposable needles, scalpels, or other sharp items should be placed intact into puncture-resistant containers before disposal. Solid waste contaminated with blood or other body fluids should be placed in sealed, sturdy impervious bags to prevent leakage of the contained items. All contained solid waste should then be disposed of according to requirements established by local, state, or federal environmental regulatory agencies and published recommendations (9,49).

IMPLEMENTATION OF RECOMMENDED INFECTION-CONTROL PRACTICES FOR DENTIS

Emphasis should be placed on consistent adherence to

recommended infection-control strategies, including the use of protective barriers and appropriate methods of sterilizing or disinfecting instruments and environmental surfaces. Each dental facility should develop a written protocol for instrument reprocessing, operatory cleanup, and management of injuries (3). Training of all DHCWs in proper infection-control practices should begin in professional and vocational schools and be updated with continuing education.

ADDITIONAL NEEDS IN DENTISTRY

Additional information is needed for accurate assessment of factors that may increase the risk for transmission of bloodborne pathogens and other infectious agents in a dental setting. Studies should address the nature, frequency, and circumstances of occupational exposures. Such information may lead to the development and evaluation of improved designs for dental instruments, equipment, and personal protective devices. In addition, more efficient reprocessing techniques should be considered in the design of future dental instruments and equipment. Efforts to protect both patients and DHCWs should include improved surveillance, risk assessment, evaluation of measures to prevent exposure, and studies of postexposure prophylaxis. Such efforts may lead to development of safer and more effective medical devices, work practices, and personal protective equipment that are acceptable to DHCWs, are practical and economical, and do not adversely affect patient care (54,55).

ABA JOURNAL / July 1997

COVER STORY / HIV AND THE LAW
Filling a Need

BY JOHN GIBEAUT

Lawyers are drilling home the point that dentists who won't treat HIV patients may be practicing the most pervasive discrimination of all

* * *

But people who have suffered discrimination by health care providers because of their HIV status received a boost in March from a panel of the 1st U.S. Circuit Court of Appeals based in Boston. The 1st Circuit became the first federal appeals court to hold that people with the human immunodeficiency virus, or HIV, are protected by the Americans with Disabilities Act, even if they show no signs of illness.

On March 5, the panel unanimously backed a trial court's grant of summary judgment for an HIV-positive woman who displayed no symptoms of AIDS but was refused treatment by a dentist. Abbott v. Bragdon, 107 F.3d 934.

* * *

The ADA, though perhaps underused in many areas, appears to be developing into the legal weapon of choice for people who claim discrimination due to HIV status. Even though private plaintiffs cannot recover monetary

damages un-der the ada, the Abbott holding raises at least a symbolic federal civil rights umbrella over people with HIV.

The 7-year-old ada forbids discrimination against disabled people in employment, government services and public accommodations. Private plaintiffs can obtain injunctions to force defendants to accommodate them, and if the government files the suit, it can ask for damages for victims, as well as fines starting at $50,000 for the first violation.

Besides targeting health care discrimination, plaintiffs' advocates have painted bullseyes on defendants who deny employment and insurance coverage. For example, HIV infection was afactor in only 1.8 percent of the charges filed with the Equal Employment Opportunity Commission during the first five years of the ADA but accounted for about one-third of the 89 lawsuits filed by the agency. See "Opening Doors," March 1996 ABA Journal, page 66.

Among recent HIV-related legal actions under the act are:

• A March 27 lawsuit filed against the Chicago public school system--the nation's third largest --by a man who says he was denied a teaching job because he is HIV-positive. Among other allegations, he accused the school system of violating an executive order by Mayor Richard M. Daley that forbids city agencies from forcing job applicants to reveal their HIV status. Doe v. Board of Education of Chicago, N.D. Ill., E. Div., No. 97-C-2167.

• A decision last year in a case in which a Beaumont, Texas, clothing store switched to a health care plan that excluded an employee who later died of AIDS. The trial court held that both the employer and the insurance carrier faced potential liability under the ada. The court denied summary judgment for the plaintiff,

however, and gave the employer an opportunity to prove that it would be an undue hardship to provide equal insurance to the infected employee. Anderson v. Gus Mayer Boston Store of Delaware, Inc., 924 F. Supp. 763 (E.D. Texas 1996).

• A 1994 case of an HIV-positive automotive parts distributor whose insurance, bought through a trade association, capped benefits for AIDS-related illnesses. The 1st Circuit held that the association and administering trust for the health plan may be considered employers and thus possibly liable under the ada. The court also held that public accommodations provisions of the act could apply to sales of services and not just to physical structures. Carparts Distribution Center, Inc. v. Automotive Wholesalers Ass'n of New England, Inc., 37 F.3d 12.

Defining 'Disabled'

Indeed, the question of whether HIV-positive people are disabled within the meaning of the ada is not likely to disappear anytime soon as new treatments allow them to live longer without developing full-blown AIDS.

In fact, the federal Centers for Disease Control and Prevention reported earlier this year that the number of deaths from AIDS declined by 13 percent from 1995 to '96, the first decrease since the epidemic began in the early 1980s. The CDC attributed the drop partly to improved treatment.

Yet the debate is sure to intensify as the disease shatters its stereotyped victim pattern--gay men and intravenous drug users--and affects a wider spectrum of the population.

"That is an issue that is growing in importance," says Bennett H. Klein, AIDS Law Project director for Gay & Lesbian Advocates & Defenders of Boston. "HIV

impairs people in ways much the same as blindness and deafness do."

* * *

Seeing Red

As many as 900,000 Americans have the virus that causes AIDS, an incurable disease that destroys the body's immune system. HIV is chiefly transmitted from person to person through an exchange of body fluids, usually during sex, or through intravenous drug use or blood transfusions. Some dentists claim they run a higher risk of contracting the virus because even routine dental care typically causes patients to bleed.

* * *

Abbott went to court, suing the dentist under both the ada and the Maine Human Rights Act. To prevail, she had to show that her condition "substantially limits" a major life activity.

While she had no AIDS symptoms, Abbott maintained that she could not have children because of the danger of passing the virus to them. Although courts have split on the issue in different contexts, the 1st Circuit agreed that reproduction was a major life activity impaired by Abbott's condition.

The panel rejected Bragdon's contention that the decision to have children is merely a lifestyle choice, not a major life activity.

"That emaciated argument lacks force," Judge Bruce M. Selya wrote for the court. "To treat reproduction as a lifestyle choice, and no more, is merely an exercise in semantics. Most acts that human beings perform--or refrain from performing--have elements of volition. Speaking is undoubtedly a major life activity, but there are those (say, monks who have taken vows of

silence) who choose to eschew it."

The court also shunned Bragdon's statutory defense allowed by the ada that Abbott's HIV status posed a "direct threat to the health or safety of others." The judges noted that public health authorities--including the dental association--agree that the risk of HIV transmission from patient to health care provider is minuscule.

* * *

Also unresolved was the ada's protection for someone incapable of having children for some reason other than HIV infection.

* * *

In view of Abbott, however, Burris of Temple University says sexual orientation should not be a factor in a court's evaluation of whether reproduction is a major life activity. "It doesn't seem to be the intention to reproduce; it's the ability to reproduce," he says.

Looking Back

As the likelihood increases that the Supreme Court will take an HIV case for review, a precursor to any decision may lie in its 10-year-old holding that a Florida schoolteacher fired for having tuberculosis was covered by the Rehabilitation Act. That statute is similar to the ada and forbids federally funded programs from discriminating against people with disabilities. School Board of Nassau County, Fla. v. Arline, 480 U.S. 273 (1987).

"Congress acknowledged that society's accumulated myths and fears about disability and disease

are as handicapping as are the phys-ical limitations that flow from the actual impairment," Justice William J. Brennan Jr. wrote for the seven-member majority. "Few aspects of a handicap give rise to the same level of public fear and misapprehension as contagiousness."

The Abbott court also took a cue from Arline that public health authorities know best, and deferred to the judgments of the dental association and the federal Centers for Disease Control and Prevention that routine care of HIV patients in dental offices is safe when appropriate precautions are taken.

Indeed, advocates for these patients estimate that more than 2 billion dental procedures have tak-en place since the outbreak of AIDS in the early 1980s--without a single documented case of transmission from a patient to a dentist.

"Tellingly, no public health authority has suggested that it is unsafe to provide routine dental care to HIV-positive patients in a private office environment," the 1st Circuit panel stated.

Dentists, Physicians Look at HIV Patients With Different Eyes

Dentists certainly are not the only health care providers who have been sued for refusing to treat people who are HIV-positive. Physicians, hospitals and other providers also have been hit with lawsuits.

Yet surveys of patients and of dentists themselves suggest that prejudice against HIV patients may be more common among dentists.

To get a general idea of how widespread such discrimination by dentists might be, Temple University law Professor Scott Burris surveyed 272 people with HIV in the Philadelphia area in 1995. He found that nearly one

in five reported experiencing discrimination during the previous five years.

Burris says the demographics of his survey sample are comparable to those of the 2,782 HIV-positive population reported in the Philadelphia metropolitan statistical area in 1994. That means more than 500 people in Philadelphia alone may have experienced discrimination by dentists.

"If my results can be extrapolated across the country, there would be thousands and thousands of cases,"Burris says.

Another survey published in 1992 by the American Journal of Public Health was conducted among 1,533 gay and bisexual men in Los Angeles and Baltimore. Of this sample, significantly more reported that dentists refused to treat them because the providers knew or suspected they had HIV or AIDS.

Of the 96 men who actually had AIDS, 16 percent reported refusals by dentists, and 5 percent reported refusals by physicians. Of the 585 HIV-positive men, 4 percent said they were turned away by dentists, while 3 percent reported refusals by physicians. The remaining 852 men were HIV-negative, with 1 percent reporting refusals by dentists and another 1 percent reporting physician refusals, indicating that sexual orientation was not a significant factor.

In a nationwide survey of 671 dentists published in 1995 in the Journal of the American Dental Association, 67 percent reported that they were willing to treat HIV-positive patients, and 84 percent believed it was their right to decide whether to accept those patients. The 67 percent of dentists willing to treat HIV patients in the 1993 survey year represented an increase from 21 percent in a 1986 survey.

For his part, Dr. Randon Bragdon says his resolve

against treating people with contagious diseases became stronger after he contracted a form of dysentery from a patient. Bragdon is the Bangor, Maine, dentist whose refusal to treat an HIV patient in his office led to an appellate decision that brought HIV status under the protection of the Americans with Disabilities Act.

The dysentery he caught from a patient kept Bragdon from practicing for three weeks. "I was very sick, and I certainly didn't want anybody else to be," he says.

Reasons for Caution

While Burris and others suspect that physicians also discriminate significantly against HIV patients, they note several distinctions between dentistry and medicine that may account for the difference:

• Although the evidence is to the contrary, dentists may peceive greater risks of contracting HIV by coming into contact with a patient's blood. A typical dental examination is a more invasive procedure than a routine physical exam and often draws blood, even during routine cleaning. Some dentists also believe they are more at risk because they use high-speed drills and water hoses that can spray a mist of blood into the air and because they are more likely to get stuck with needles.

• Physicians, by virtue of their training, are accustomed to treating many deadly diseases, while dentists are not. "There are other diseases that are even more infectious and just as fatal as AIDS," says Dr. Yank D. Coble, an American Medical Association trustee from Jacksonville, Fla.

• Dentists may fear losing business when people learn they are treating HIV patients. In fact, 75 percent of the dentists in the dental association journal survey reported they were afraid to show a willingness to treat

HIV patients for fear of driving away other patients.

"I don't want to be known as the 'AIDS dentist,' " says a Boston dentist who treats HIV patients and requested anonymity. "I think there's a good chance that you'll lose patients if word gets out that you're treating people who are HIV-positive."

Perhaps most significant was a torrent of negative publicity that swamped the dental profession in the late 1980s after the public learned that Dr. David Acer, an infected Stuart, Fla., dentist, had passed on hiv to at least half a dozen of his patients. Acer died in 1990.

"We had, literally, for a time, people who were scared to death to go to a dentist's office," says Dr. Gary Rainwater, president of the American Dental Association. "There's probably still some hangover from that."

--John Gibeaut

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In Focus: Corporate Counsel

Employment Law Special

IS INFERTILITY AN ADA 'DISABILITY'?

IF REPRODUCTION IS DEEMED A MAJOR LIFE ACTIVITY, EMPLOYERS' INSURANCE COSTS MAY ESCALATE.

Gary D. Friedman and Joyce Phillips [FNa]
Special to the National Law Journal

THE 8TH U.S. Circuit Court of Appeals recently ruled in Krauel v. Iowa Methodist Medical Center [FN1] that the inability to conceive a child or reproduce is not an impairment of a "major life activity" under the Americans With Disabilities Act, or ADA. [FN2] The ruling sets the stage for a heated debate among the courts over whether infertility is a protected impairment under the ADA, and thus whether employers must pay for employees' infertility treatments and refrain from taking adverse action against workers who suffer from this impairment.

Infertility affects up to one in six couples in America. It

is estimated that more than S1 billion is spent annually by couplēs seeking to overcome infertility, [FN3] and this amount is likely to rise as infertility becomes a new area for workplace legal battles. More employers are being sued by workers seeking to invoke the protections of the federal anti-discrimination laws, particularly the ADA, to require coverage for infertility treatments and prohibit discrimination relating to those treatments. [FN4]

Until recently, employment decisions, such as whether to offer infertility benefits as part of a health care package, were strictly business judgments. However, 11 states-Arkansas, California, Connecticut, Hawaii, Illinois, Maryland, Massachusetts, Minnesota, New York, Rhode Island and Texas-now mandate either full or limited coverage of such treatments, although employers in states with self-funded plans are exempt.

The Employee Retirement Income Security Act, or ERISA, pre-empts all state laws relating to health plans except those that regulate insurance. Under ERISA, however, a self-funded plan is not deemed to be "insurance," so those plans are exempt even from state insurance regulations. [FN5] Although only 15 percent of companies with 10 to 499 employees self-fund, 91 percent of companies with 20,000 or more employees do so. [FN6]

Given the lack of a mandate to provide coverage for these treatments and the potentially high cost of doing so, it is no surprise that relatively few employers provide such coverage. Only 25 percent of traditional indemnity health plans and 37 percent of HMOs offer coverage for infertility treatments, and even fewer cover high-cost procedures, such as in-vitro fertilization. [FN7] Thus, employees now are starting to seek judicial intervention in a matter they previously handled on their own or informally with their employers.

Enacted in 1990, the ADA prohibits discrimination against disabled individuals on the basis of their disabilities. Title I, which governs private employment, "prohibits discrimination in regard to job application procedures, the hiring, advancement, or discharge of employees, employee compensation, job training, and other terms, conditions, and privileges of employment."

[FN8] The main purpose of Title I is to ensure that disabled persons are afforded equal opportunity in the workplace, including equal access to the "privileges" of employment, such as health benefits. [FN9]

The threshold question in determining whether employers must provide infertility treatment benefits is whether infertility is a "disability" under the ADA. The 8th and 5th circuits, in the recent cases of Krauel [FN1O] and Zatarian v. WDSU-Television Inc., [FN11] have concluded that infertility is not a disability under the ADA, but several decisions from the Northern District of Illinois have reached a contrary conclusion.

Infertility as a 'Disability'

The ADA defines "disability" as "a physical or mental impairment that substantially limits one or more of the major life activities." [FN12] Federal courts that have considered the issue appear to agree that infertility is an impairment under the ADA, but they vigorously disagree over whether the ability to reproduce, which is adversely affected by the impairment, is a major life activity.

The 8th Circuit's decision in Krauel is the most recent treatment of the issue. The plaintiff was a hospital employee covered by a self-funded health plan that excluded coverage for infertility treatments. Following a diagnosis of endometriosis, the plaintiff had laser surgery. After a year of unsuccessful attempts to conceive naturally, the plaintiff received artificial insemination, resulting in the birth of her child. Although her health plan covered the costs of her laser surgery, pregnancy and delivery, it did not cover the costly infertility treatment. She sued, challenging the denial of benefits under the ADA, the Pregnancy Discrimination Act and Title VII of the Civil Rights Act. The district court granted summary judgment for her employer.

The 8th Circuit affirmed, concluding that infertility is not a covered disability under the ADA, notwithstanding the Equal Employment Opportunity Commission's specific regulations defining a "physical or mental impairment" as including a disorder of the reproductive

system [FN13] and infertility as a covered physical impairment. [FN14] Central to the court's analysis was the conclusion that the ability to reproduce is not a major life activity, such as "caring for oneself, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning and working," under the ADA. [FN15]

The court found that the plaintiff was able to do all these things, and that her infertility in no way prevented her from performing her job duties. It concluded that "to treat reproduction and caring for others as major life activities under the ADA would be inconsistent with the illustrative list of activities in the regulations, and a considerable stretch of federal law." [FN16]

In Zatarain, the 5th Circuit also considered the issue of whether infertility is a disability, and decided that it is not. The plaintiff, a reporter and anchor person for a Louisiana television station, requested and was granted reduced work hours from her three daily newscasts during the period of her infertility treatments. After the station chose not to renew her contract, she brought suit under the ADA and Title VII, alleging, among other things, that her infertility was a disability that impaired the major life functions of working and reproduction. The district court granted the station's summary judgment motion, and the 5th Circuit affirmed without opinion.

The lower court found unpersuasive the plaintiff's claim that her inability to work all three daily newscasts rendered her unable to perform her job, concluding that the "inability to perform a single particular job does not constitute a substantial limitation in the major life activity of working." [FN17] The court also rejected the plaintiff's argument that reproduction is a major life activity under the ADA, stating that a "person is required to walk, see, learn, speak, breathe, and work throughout the day, day in and day out [but] a person is not called upon to reproduce throughout the day, every day." [FN18] Thus, the court held that treating reproduction as a major life activity would be an expansion of the law it was unprepared to make. Other courts, however, have reached a contrary conclusion as to whether infertility is

a protected disability under the ADA. For example, in Pacourek v. Inland Steel Co., [FN19] the plaintiff's lengthy infertility treatments caused her to miss many workdays. Following her termination for excessive absenteeism, she brought an ADA action against her employer, alleging that she was fired because of her condition.

In denying the employer's motion to dismiss the ADA claim, the court held that the EEOC regulation defining "physical impairment" to include a disorder of the reproductive system would be meaningless if reproduction was not considered a major life activity, because reproduction is the most likely activity affected by a disorder of the reproductive system. It also noted that the 7th Circuit, in McWright v. Alexander, [FN2O] concluded that Rehabilitation Act regulations, which are virtually identical to the ADA regulations, "define the protected class of handicapped individuals to include any person with a physiological disorder affecting the reproductive system." [FN21]

More recently, the Pacourek court denied the employer's motion for summary judgment, concluding that "none of us, nor any living thing, would exist without reproduction. . . [T]o call working a major life activity, but to deny the same status to reproduction seems ludicrous." [FN22]

Relying on the Pacourek analysis, a Northern District of Illinois court, in Erickson v. Board of Governors, [FN23] also held that infertility is a protected disability under the ADA. The plaintiff, who was fired for excessive absenteeism that she claimed was attributable to her infertility treatments, brought an action under the ADA. In moving to dismiss the ADA claim, her employer argued that reproduction could not be a major life activity because: it required the participation of two individuals; it was a "very complex process," unlike such basic functions as walking, seeing, hearing, speaking and breathing; and an individual was not called upon to reproduce every day.

The Erickson court found these arguments unpersuasive. The court held that the EEOC list was full of activities that involved interacting with others, such as

talking and listening, and that although the EEOC examples such as thinking and talking are complex processes, the simplicity or complexity of an activity is not relevant to whether an activity is a major life activity. Finally, the court rejected the reasoning of Zatarain, concluding that it had ignored "the processes that occur continually in both the male and female reproductive systems in order to achieve conception." [FN24] Thus, it concluded that infertility is a physical impairment that substantially limits the major life activity of reproduction, and denied the motion to dismiss.

There appears to be additional support for the conclusion reached in Pacourek and Erickson that reproduction is a major life activity. First, both the ADA's legislative history and the EEOC's regulations list the reproductive system as a system that may be affected by an impairment. [FN25] Infertility is the most common and most easily imagined result of an impaired reproductive system. The Pacourek court concluded that the reproductive system would not have been listed if reproduction had not been deemed a major life activity. [FN26]

HIV Disability Case Law

Second, the legislative history indicates that the human immunodeficiency virus, or HIV, infection is a disability because, at least in part, it affects reproduction, not necessarily physiologically, but in practical terms, because the virus can be passed to the fetus and pregnancy can compromise the immune system. Being HIV-positive is, therefore, a substantial limitation to procreation and intimate sexual relationships. [FN27] This, too, has been accepted by several courts in holding that being HIV-positive constitutes a disability. [FN28]

For example, in Doe v. Kohn, Nast & Graf P.C., [FN29] an attorney who was terminated by his firm following disclosure that he was HIV-infected brought suit under the ADA and several state laws. Arguing that the plaintiff was not disabled under the ADA because AIDS did not affect his ability to work, the law firm contended:

"Not in any way to be facetious, but plaintiff is not being hired to practice procreation, or to be a professional blood donor, for example. He is being hired to practice law." The court rejected this argument, noting that Congress had chosen to use "major life activity" as the basis for ADA protection, instead of "work-life" or "major work activities," and held "that the language of the [ADA] does not preclude procreating as a major life activity." [FN3O]

In light of the legislative history, the EEOC regulations and decisions concerning HIV, there is a legitimate argument that, notwithstanding the 5th and 8th circuits' reasoning, infertility is a disability under the ADA. According to these authorities, reproduction is prime among the major life activities adversely affected by HIV infection. As the Pacourek court observed, reproduction is perhaps foremost among all life activities. If courts accept infertility as a disability, this will represent a substantial expansion of the federal anti-discrimination laws.

Determining whether infertility is a disability under the ADA may not be the end of the analysis regarding health plans. If the courts resolve that the ADA prohibits discrimination related to infertility, they will need to decide how far the ADA extends in regulating health plans. Judicial decisions that interpret coverage broadly could result in a significant increase in the cost of employer-provided health benefits.

Resolution of this issue is complicated by the fact that the ADA does not prohibit all distinctions in coverage that affect disabled individuals. For example, the ADA does not prohibit nondisability-based limits or exclusions on coverage, even those that disproportionately affect disabled employees. [FN31] The ADA also permits disability-based distinctions based on risk classification. [FN32] But neither exception applies if used as a subterfuge to evade the statute's provisions. [FN33]

This issue is clouded further by the dearth of legislative history on the subject. The EEOC, however, has issued an interim guidance on the provisions of this exception. [FN34] Although these guidelines do not have the same force, and courts are not required to give them the same

deference, as regulations, they are a good starting point in the analysis. The EEOC interpretation is likely the most expansive the courts would adopt. Thus, the guidelines provide a useful indicator of how courts will resolve this issue.

The interim guidance establishes a two-step framework for determining whether a distinction in a health care plan violates the ADA. First, it must be determined whether a distinction is disability-based. If it is, the EEOC still would allow the employer to provide coverage in accordance with accepted principles of risk assessment and/or risk classification, even if this limits coverage for disabled individuals.

Determining whether the distinction is disability-based is the first step because "distinctions that are not based on disability, and that are applied equally to all insured employees, do not discriminate on the basis of disability and so do not violate the ADA." [FN35] For example, a limit on eye exams affects employees with severely impaired vision and eye-related diseases, but it also affects employees who need glasses or contact lenses. The ADA allows for these limits "although such distinctions may have a greater impact on certain individuals with disabilities." [FN36]

The 8th Circuit discussed these guidance provisions in Krauel, even though it already had determined that reproduction was not a major life activity and, therefore, that infertility was not a disability. The court concluded that the exclusion of coverage for infertility treatments affected both the disabled and the nondisabled. The court used an example involving two employees: one infertile as a result of ovarian cancer, which is a disability, and the other infertile because of age, which is not a disability.

The Zatarain court also noted that infertility may be caused by stress, which would not likely be viewed as an impairment. Thus, the Krauel court concluded that a benefits plan that did not provide infertility treatments, regardless of the condition's cause, would not violate the ADA. If the 8th Circuit is correct that not all infertility is caused by an impairment, and thus is not a disability under the ADA, it would appear that even the EEOC

interim guidance would approve of an exclusion of all infertility treatments, even if it affected disabled employees disproportionately.

Even if courts conclude that all infertility is a disability, the ADA's insurance exception might still apply because the act allows for benefits exclusions that are justified by risk classification generally employed by the insurance industry. The ADA provides that the act should not be construed to prohibit or restrict an employer from using traditional risk calculations indeciding what benefits to provide. [FN37]

This exception is unavailable, however, if the employer uses it as a subterfuge to evade the purposes of the ADA. [FN38] This poses an unresolved problem, because the statute does not define "subterfuge," and the EEOC's guidance on the definition was rejected by the Krauel court.

The EEOC interim guidance defines subterfuge as a disability-based disparate treatment that is not justified by the risks for costs associated with the disability. [FN39]

The 8th Circuit rejected this definition, relying instead on Ohio PERS v. Betts, [FN4O] in which the Supreme Court rejected a definition of subterfuge similar to that used in the ADA.

The 8th Circuit adopted the Betts definition, and held that, for a benefits limitation to be a subterfuge, it must be used to discriminate in some nonfringe benefit aspect of the employment relationship. [FN41] The definition ultimately adopted will likely have a major impact on the issue of health plans under the ADA, and certainly will be the focus of a great deal of future litigation.

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FN1. 95 F.3d 674 (8th Cir. 1996).

FN2. Americans With Disabilities Act of 1990, 42 U.S.C. 12102(2)(A).

FN3. Paul Zarutski and Robert Rubin, "Balancing Costs & Quality," Business & Health, Dec. 1, 1994, at 56.

FN4. Barbara Whitaker, "Infertility is a New Focus of Workplace Lawsuits," N.Y. Times, Apr. 21, 1996 at 12.

FN5. 29 U.S.C. 1144.

FN6. Kristin Davis, "The Agonizing Price of Infertility," Kiplinger's Personal Finance Magazine, May 1996, at 5.

FN7. Id.

FN8. 42 U.S.C. 12112(a).

FN9. The EEOC interprets the provision to require employers to provide the same coverage to workers with disabilities as it does to employees without disabilities, and as prohibiting employers from making disability-based distinctions with regard to what coverage is offered. EEOC Americans With Disabilities Act Technical Assistance Manual, 1-7.9.

FN10. 95 F.3d 674 (8th Cir. 1996).

FN11. 881 F. Supp. 240 (E.D. La. 1995), aff'd, 79 F.3d 1143 (5th Cir. 1996).

FN12. 42 U.S.C. 12102(2)(A).

FN13. 29 C.F.R. 1630.2(h)(1).

FN14. 95 F.3d at 677.

FN15. Id., citing 29 C.F.R. 1630.2(i).

FN16. Id.

FN17. 881 F. Supp. at 243-4, citing 29 C.F.R. 1630.2(j)(3)(i).

FN18. Id. at 243.

FN19. 858 F. Supp. 1393 (N.D. Ill. 1994).

FN2O. 982 F.2d 222 (7th Cir. 1992).

FN21. Id. at 1404-05, The Rehabilitation Act, 29 U.S.C. 701 et seq., predates the ADA and applies to the U.S. government and federally funded programs. The 7th Circuit did not need to rule in McWright on whether infertility is a
handicap because the employer had conceded that point.

FN22. 916 F. Supp. 797, 804 (N.D. Ill. 1996).

FN23. 911 F. Supp. 316 (N.D. Ill. 1995).

FN24. Id. at 322.

FN25. H.R. Rep. No. 101-485 (Part III), 101st Cong., 2d Sess. (1990), reprinted in U.S.C.C.A.N. 445; S. Rep. No. 101-116, 101st Cong., 1st Sess. (1989); 29 C.F.R. 1630.2(h)(1).

FN26. Pacourek, 858 F. Supp. at 1404.

FN27. H.R. Rep. No. 101-485 (Part II), 101st Cong., 2d Sess. (1990), reprinted in 1990 U.S.C.C.A.N. 267, 334.

FN28. Anderson v. Gus Mayer Boston Store, 924 F. Supp. 763 (E.D. Tex. 1996); Abbott v. Bragdon, 912 F. Supp. 580 (D. Maine 1995); Doe v. Kohn Nast & Graf P.C., 862

F. Supp. 1310 (E.D. Pa. 1994); Thomas v. Atascadero Unified Sch. Dist., 662 F. Supp. 376 (C.D. Cal. 1986).

FN29. 862 F. Supp. 1410.

FN3O. Id. at 1320.

FN31. EEOC Interim Guidance on the Application of the Americans With Disabilities Act of 1990 to Disability-Based Distinctions in Employer-Provided Health Insurance, EEOC Compliance Manual (CCH) para. 6902 ("EEOC Interim Guidance") .

FN32. 42 U.S.C. 12201(c).

FN33. Id.

FN34. EEOC Interim Guidance.

FN35. Id.

FN36. Id.

FN37. 42 U.S.C. 12201(c).

FN38. Id.

FN39. EEOC Interim Guidance.

FN4O. 492 U.S. 158.

FN41. 95 F.3d at 678-79.

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REVIEW ARTICLE

CURRENT CONCEPTS

THE INFERTILE COUPLE

HOWARD W. JONES, JR., M.D.,

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MOST adults have life plans that include children. When those who desire children find their efforts unsuccessful, frustration, despair, and helplessness are common and debilitating consequences. In this article we survey the scope of the problem of infertility, its current therapies, and the future prospects.

SCOPE OF THE PROBLEM

In the United States, surveys conducted by the National Center for Health Statistics estimate that in 1988, 8.4 percent of women 15 to 44 years of age, or 4.9 million women, had an impaired ability to have children.[1] Of these women, 2.2 million had no children (primary infertility), and 2.7 million had at least one child (secondary infertility).' Approximately 25 percent of women have an episode of infertility at some point during their reproductive life.[2,3] The rates were similar in surveys conducted in 1965, 1976, and 1982.[4-6]

Since 1988 the problem of infertility has increased in several ways.[7] First, there are more infertile women in

the population. The large increase in the number of women 35 to 44 years of age (4 million more in 1988 than in 1982) means that there has been an increase of 37 percent in the number of childless women in that age group.[1] Second, a larger proportion of infertile couples now seek treatment. About 43 percent of women with impaired fertility obtain help for their infertility.[8] In 1988, 1.35 million women consulted physicians about reduced fertility; they accounted for 2.3 percent of U.S. women of reproductive age and 4.6 percent of married women.[1] Approximately 24 percent received advanced treatment (tubal surgery, insemination, ovulation induction, or in vitro fertilization).[8] Women with primary infertility were twice as likely to obtain treatment as those with secondary infertility (51 percent vs. 22 percent).[4] The results were similar in a British population[7]

About half of couples with infertility eventually conceive. Several factors markedly affect the likelihood of pregnancy in a particular couple, however, including the duration of infertility,[10] the age of the woman[11] (Fig. 1), and the cause of the infertility[9,10,13] (Table 1). Contemporary methods of assisted reproduction have increased the overall pregnancy rate.[14-16]

A surprising number of pregnancies occur independently of treatment,[10] especially when bilateral tubal obstruction, azoospermia, and prolonged amenorrhea are absent. Each month, approximately 3 percent of couples with unexplained infertility conceive on their own.[9,17] Not only does this provide some encouragement to couples who may not have access to an infertility specialist, but it also calls into question the validity of many widely used tests and therapies. The value of several such tests and therapies has never been clearly established in clinical trials.[18-20] The Cooperative Multicenter Reproductive Medicine Network, a nationally based collaborative study group funded by the National Institutes of Health, was established in 1990 to correct these shortcomings.[21]

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The Infertile Couple

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Infertility is generally defined as the inability to conceive after one year of unprotected, adequately timed intercourse. Causes of infertility include ovulatory dysfunction, tubal factors, peritoneal factors and uterine factors, as well as male factors that are the sole or contributing causes of infertility in up to 40 percent of infertile couples. Reasonable treatment managed by a family physician includes patient education and counseling, and therapy with clomiphene, bromocriptine and progesterone. For treatment beyond this level, referral to an infertility specialist should be considered.

Infertile couples often consult their family physician, who is especially well-suited to initiate evaluation and early treatment. Prompt referral is equally important if the infertile couple's evaluation and treatment extends beyond the expertise of the family physician.

Definition and Scope of Problem

The generally accepted definition of infertility is inability to conceive after one year of unprotected, adequately timed intercourse.[1,2] Conception rates are 20 to 25 percent per month for normal couples, 95 percent of whom conceive within one year. Couples with primary infertility do not achieve pregnancy; those with secondary infertility do not conceive within one year after having previously achieved pregnancy. In general, primary and secondary infertility are evaluated by the same methods.

The incidence of infertility in developed countries is estimated at 10 percent to 15 percent.[1,3] Nearly 5 million women in the United States report decreased ability to conceive: 2.2 million have primary infertility; 2.7 million have secondary infertility. Twenty-five percent of all women report isolated episodes of infertility.[3-5] The inability to conceive increases with age.

In recent years, the number of women with infertility problems has increased. The actual rate of infertility has increased only in women 20 through 24 years of age.[6] The incidence of sexually transmitted diseases that result in adhesions and tubal dysfunction has increased, especially in upper socioeconomic groups,[6,7] and this possibly accounts for most of the increased infertility in the 20- to 24-year-old group.

Many women are postponing childbearing and are attempting conception after the age of 35[3,8] which carries a higher risk for endometriosis, adverse infectious and genetic exposure, ovulatory dysfunction and other age-specific decreased fertility factors.[6,8]

More couples seek medical evaluation and treatment for infertility because advanced technology is now available.[7,8] Adoption, the alternative to childbearing, has become more difficult, taking from 18 to 24 months to accomplish and costing $10,000 to $15,000.[7,9] Of the 1.35 million women who consulted a physician for infertility problems in 1988, about one-half conceived spontaneously in the next year.[10] About 24 percent received advanced treatments for infertility,[3] and the percentage continues to increase.

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Frequency of Nonparenteral Occupational Exposures to Blood and Body Fluids Before and After Universal Precautions Training

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PURPOSE: During annual periods before and after Universal Precautions training, we compared the frequency of health care workers' self-reported cutaneous exposures to blood and various body substances from any patient and from patients presumed infected with human immunodeficiency virus type 1 (HIV-1).
SUBJECTS AND METHODS: Self-reported cutaneous exposures to blood, sputum, urine, feces, and other body substances were evaluated separately in 559 workers during the first survey and 269 workers. during the second.
RESULTS: Mean annual blood exposures decreased from 35.8 to 18.1, and mean annual exposures to all substances decreased from 77.8 to 40.0 ($p < 0.001$ for both determinations).

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CONCLUSIONS:These data that Universal Precautions training significantly decreased but did not eliminate cutaneous exposures to blood and body substances, The results further suggest that the risk for HIV-1 infection associated with cutaneous exposures is substantially lower than the risk associated with parenteral exposures.

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